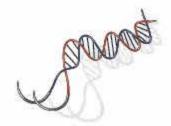


# Department of Surgery Annual Report

JULY 1, 2011 - JUNE 30, 2012



Department of Surgery

Annual Report

#### R.S. Mclaughlin Professor And Chair

Dr. J.T. Rutka

#### **Associate Chair And Vice-Chairs**

Dr. O. Rotstein Associate Chair
Dr. D.A. Latter Vice-Chair, Education
Dr. R.R. Richards Vice-Chair, Clinical

Dr. B. Alman Vice-Chair, Research/A.J. Latner Professor and Chair of Orthopaedics

Dr. R. McLeod Vice-Chair, Quality
Dr. A. Kapus Associate Chair, Research

#### **Surgeons In Chief**

Dr. J.G. Wright The Hospital for Sick Children/Robert B. Salter Chair in Surgical Research

Dr. J.S. Wunder Mount Sinai Hospital/Rubinoff-Gross Chair in Orthopaedics

Dr. L.C. Smith St. Joseph's Health Centre Dr. O.D. Rotstein St. Michael's Hospital

Dr. R.R. Richards Sunnybrook Health Sciences Centre
Dr. L. Tate The Toronto East General Hospital

Dr. S. Keshavjee University Health Network/James Wallace McCutcheon Chair in Surgery

Dr. J.L. Semple Women's College Hospital

#### **University Division Chairs**

Dr. C. Morshead Anatomy
Dr. C. Caldarone Cardiac Surgery

Dr. A. Smith General Surgery/Bernard and Ryna Langer Chair
Dr. A. Lozano Leslie Dan Professor and Chair of Neurosurgery
Dr. B. Alman A.J. Latner Professor and Chair of Orthopaedics

Dr. C. Forrest Plastic Surgery (Interim Chair)

Dr. T. Waddell F.G. Pearson/R.J. Ginsberg Chair in Thoracic Surgery

Dr. S. Herschorn Martin Barkin Chair in Urological Research

Dr. T. Lindsay Vascular Surgery

### **Table of Contents**

Chair's Report	St. Michael's Hospital
Research	Division of Cardiac Surgery 104
Postgraduate Education 8	Division of General Surgery 106
Undergraduate Education 10	Division of Neurosurgery
Continuing Education	Division of Orthopaedics
and Professional Development	Division of Plastic and Reconstructive Surgery . 134
Surgical Alumni Association	Division of Urology
Office of International Surgery 14	Division of Vascular Surgery 137
Division Of Anatomy	Sunnybrook Health Sciences Centre
Division of Cardiac Surgery	Division of Cardiac and Vascular Surgery 140
Division of General Surgery 20	Division of General Surgery
Division of Neurosurgery	Division of Neurosurgery
Division of Orthopaedic Surgery	Division of Orthopaedics
Division of Thoracic Surgery	Division of Plastic and Reconstructive Surgery 160
Division Of Urology	Division of Urology
Division of Vascular Surgery	Toronto East General Hospital 169
The Hospital for Sick Children 41	Division of General Surgery 171
Division of Cardiac Surgery 44	Division of Orthopaedics
Division of General Surgery 49	Division of Plastic and Reconstructive Surgery 172
Division of Neurosurgery 53	Division of Urology
Division of Orthopaedics 63	University Health Network
Division of Plastic and Reconstructive Surgery 71	Division of Cardiac Surgery 177
Division of Urology 76	Division of General Surgery
Mount Sinai Hospital	Division of Neurosurgery 196
Division of General Surgery 81	Division of Orthopaedics 209
Division of Orthopaedics	Division of Plastic and Reconstructive Surgery . 215
Division of Plastic and Reconstructive Surgery 93	Division of Thoracic Surgery
Division of Urology	Division of Urology
St. Joseph's Health Centre 100	Division of Vascular Surgery 238
Division of General Surgery 101	Women's College Hospital 241
Division of Orthopaedics 101	Division of General Surgery 242
Division of Plastic Surgery and	Division of Orthopaedics 242
Reconstructive Surgery 102	Division of Plastic and Reconstructive Surgery . 244
Division of Thoracic Surgery 102	Division of Urology 246
Division of Urology 102	Division of Anatomy
	Research In Education
	Table of Photographs
	Cross Appointments



## Chair's Report

Dr James T Rutka, MD, PhD, FRCSC

n preparing this year's Chair's Report, I was inspired by the concept of "the journey" which all of us take in our professional careers, and by this quotation by Greg Anderson: "Focus on the journey, not the destination. Joy is found not in finishing an activity but in doing it". As surgeons, we are all very goal-oriented, and try to close the cover of one book before we open the cover of another. This past year was characterized by the completion of our Strategic Plan: "Transforming Surgery: Beyond the Cutting Edge". While the ink was still drying on the pages of the published version of our Strategic Plan, it felt good to have completed this document which took a better part of an academic year to do. However, I soon realized thereafter that our "journey" in the Department of Surgery was just beginning. Our plan is filled with numerous short and long-term goals, and with the hope that we will take our Department to a new destination once we have completed this 5 year journey.

The Strategic Planning Steering Committee was exceptionally busy from September through to December in separate working groups focusing on our five main strategic goals: 1) Research; 2) Education; 3) Faculty Development; 4) Best Practices; and 5) Integration. On January 27th, 2012, we held a Strategic Planning retreat at the University Club at which we heard inspiring presentations from Dean Catharine Whiteside, Dr. Robert Bell President and CEO of the University Health Network, Dr. Jay Rosenfield Vice Dean Undergraduate Medical Education, and Dr. Mark Bernstein Greg Wilkins-Barrick Chair in International Surgery. We were also very fortunate to have Deputy Minister of Health and Long Term Care, Mr Saad Rafi, as a special invited guest who spoke to us about the challenges and opportunities with the future provincial health care programs and initiatives. The retreat culminated with various break-out sessions, and collations afterwards of key themes and concepts, all of which were used to inform the final strategic plan report. This can be found at: http://surgery.utoronto.ca/about/ strategic-plan.htm.

To accomplish all of our goals within the pages of this plan will definitely be a journey, and I look forward to traveling the road with all of you.

A good portion of this past year was spent upgrading our efforts in Undergraduate Medical Education (UME) in the Department of Surgery. To this end, after an exhaustive search, we were very fortunate to appoint Dr. George Christakis, Cardiac Surgery, Sunnybrook Health Sciences Centre, into the role as Director of

UME. George replaced Dr. David Backstein who had served admirably in that role over the past many years. Soon after, George appointed Mr. Shibu Thomas as the Co-ordinator of UME. Together, they have worked assiduously to improve the curriculum for medical students by adjusting the content and timing of the lectures in the "crash course" for Year 3 students, and by solidifying their clinical experiences at each site. Furthermore, we have organized a "Life in Surgery" evening event for medical students so that they can learn about how to achieve work and life balance in a career in surgery. We have initiated a "Suture-tying Workshop" in which Year 1-2 medical students have an opportunity to learn the art of hand- and instrument-assisted suturing techniques instructed by some of the best in our faculty. We have offered a Student Surgical Skills Development (S3D) event in which representatives of the different Divisions meet with medical students at a dinner or lunch event to provide informal advice about careers in surgery. This year was the first that we initiated a Surgery Exploration and Discovery (SEAD) course providing medical students with an in-depth, hands-on 2 week course to enable them to learn about the different surgical specialties. Finally, I was delighted to inaugurate a "Breakfast with the Chairman" seminar series where eager medical students would join me for breakfast in an informal setting in the Banting Conference Room to hear my thoughts about the excitement of a selected career path in Surgery. All of these new initiatives and programs helped us prove to the Committee on Accreditation of Canadian Medical Schools (CACMS) and the Liason Committee on Medical Education (LCME) in the US that we highly value the opportunties to teach and mentor medical students at the University of Toronto. You will be pleased to know that the Faculty of Medicine passed its Accreditation cycle this year with flying colours.

There were some administrative changes this past year. Neil Fleshner was appointed as the Martin Barkin Chair in Urology following Sender Herschorn who had served in this position for over 10 years. Carmine Simone was appointed as Chief of Surgery at Toronto East General Hospital following Laura Tate in this role. And, Avery Nathens was named Surgeon-in-Chief at Sunnybrook Health Sciences Centre, following on the heels of Robin Richards who had served in this position for 11 years. Finally, Oleg Safir, Orthopaedics, Mt Sinai Hospital, was appointed as the Director of the Surgical Skills Centre, replacing Helen MacRae who had served in that capacity for the past 10 years. Helen, on the other hand, jumped

immediately into the position of program director of the Colorectal Surgery fellowship program, taking over from Marcus Burnstein who had served admirably in the role for 16 years.

In this age of rapid communications, the Department of Surgery is leading the way with its monthly newsletter, Excelsior, which provides timely and important news to all faculty members. We have also created "e-clips", as a rapid fire communication which delivers congratulatory notes to deserving faculty members, important deadline information, and notices to all. The Surgical Spotlight remains our main method of reaching out to faculty and alumni on a quarterly basis, and I should like to thank Dr. Martin McKneally and Alina Gaspar for the wonderful work they do in making this periodical as informative, and interesting as possible.

This year, Todd Penner was promoted to Assistant Professor; and Jack Barkin, Natalie Coburn, Jeff Fialkov, Carol-Anne Moulton, Katalin Szaszi, and Homer Tien were promoted to Associate Professor. To Full Professor, I am delighted to report the successes of Helen MacRae, Sandro Rizoli, and Cari Whyne. Finally, we are indeed proud of Dimitri Anastakis, Past Chair of Plastic and Reconstructive Surgery (PRS), who was appointed to the position of Vice Dean of Continuing Education and Professional Development.

It was an extremely busy year with the following surgeons successfully undergoing and passing their Continuing Appointment Reviews as adjudicated by Dr Ori Rotstein: Darlene Fenech, General Surgery; Ralph George, General Surgery; Rebecca Gladdy, General Surgery; Clement Hamani, Neurosurgery; Armando Lorenzo, Urology; Carol-Anne Moulton, General Surgery; Catherine O'Brien, General Surgery; Giuseppe Papia, Vascular Surgery; Tom Schweizer, Neurosurgery; John Theodoropoulos, Orthopaedics; Kazuhiro Yasufuku, Thoracic Surgery; Gelareh Zadeh, Neurosurgery; and Toni Zhong, PRS.

Numerous awards were once again earned by a plethora of faculty members and residents in the Department. Some to make mention of here include: Peter Ferguson, Tovee Postgraduate Prize; Georges Azzie, Tovee Undergraduate Prize; Marilyn Heng, the DR Wilson Award for Resident Teaching; Mojgan Hodaie, Bernard Langer Surgeon-Scientist Award; Teodor Grantcharov, George Armstrong-Peters Prize; Jonathan Yeung, Gallie-Bateman Award; Kristen Davidge, Shafie Fazel Award; Albert Yee and Cari Whyne, Charles Tator Mentoring Award; Benedict Rogers and Boris Krischek, Zane Cohen Clinical Fellowship Achievement Award; and Ren-Ke Li, the Lister Prize.

We were indeed very fortunate to be partners with our fully affiliate hospitals in the announcement of several new Chairs held by Department of Surgery faculty including: Mark Bernstein, Neurosurgery, Greg Wilkins-Barrick Chair in International Surgery at UHN; Robert Nam, Urology, Ajmera Family Chair in Urologic Oncology at Sunnybrook; Robert Magissano, Vascular Surgery, Inaugural Maggisano Chairholder at Sunnybrook; Homer Tien, General Surgery, Major Sir Frederick Banting Term Chair in Military Trauma Research, Sunnybrook; and Tom Waddell, Thoracic

Surgery, Richard and Heather Thomson Chair in Thoracic Translational Research at UHN.

Additional notable awards include election to the Canadian Academy of Health Sciences for Ben Alman and Robin McLeod; the William K Lindsay Faculty teaching award to Oleh Antonyshyn; the 2012 American Urological Association Foundation Distinguished Mentor Award to Darius Bagli; the 2012 Excellence in Public Relations Award to Bob Bell; the Bernard Goldman Award to George Christakis; the Ontario Genomics Institute for Societal Impact of Genomics Prize to Abdallah Daar; the Alan R Hudson in Neurosurgery to Peter Dirks; the International Neuropsychology Society Lifetime Achievement Award to Maureen Dennis; the CPSO Council Award to Fred Gentili; the Distinguished Service Award from the American Hepato-Pancreato-Biliary Association to Paul Grieg; Excellence in Postgraduate Medical Education to Robert Mustard; Orthopaedic Research Society New Investigator Award to Diane Nam; PAIRO Los Ross Resident Advocate Award to Gelareh Zadeh; and the Gallie Lecturer Award by the RCPS to Charles Tator.

While far too numerous to mention in this report, our faculty have continued to distinguish themselves with the receipt of grants from many national peer-reviewed granting agencies including the CIHR, Physician Services Incorporation, Colon Cancer Canada, Cystic Fibrosis Canada, Canadian Cancer Society Research Institute, Heart and Stroke Foundation, and NSERC. In total, our faculty received \$38 Million in research funding this past year. In addition, two of our faculty distinguished themselves with publications in Nature, arguably the world's most authoritative and high impact journal. Michael Taylor, Neurosurgery, described subgroup-specific structural variation across 1,000 medulloblastoma genomes in Nature 488: 49-56, 2012. And Michael Tymianski, Neurosurgery, reported on the treatment of stroke with a PSD-95 inhibitor in the primate brain in Nature 483: 213-217, 2012.

Thanks to the ongoing efforts of our Senior Development Officer, Darina Landa, we have continued to make excellent progress with our Advancement Program. This past year, we received \$2.7 Million in philanthropic and industry related sponsorship.

New faculty recruits included: Marcelo Cypel, Thoracic Surgery, UHN; Anand Govindarajan, General Surgery, Mt Sinai; Paul Karanicolas, General Surgery, Sunnybrook; Martin Koyle, Urology, Sick Kids; Girish Kulkarni, Urology, UHN; Jason Lee, Urology, St Michael's; Paul Kuzyk, Orthopaedics, Mt Sinai; Mark Wheatcroft, Vascular Surgery, St Michael's; and Tony Moloney, Vascular Surgery, St Michael's.

Sadly, we lost several revered and trusted colleagues in the Department of Surgery who passed away this past year: Leith Douglas, PRS; Ab Guha, Neurosurgery; Ara Keresteci, Urology; Tait McPhedran, General Surgery; and Tom Morley, Neurosurgery.

For the upcoming year, I have identified the following goals and objectives to help us along our journey. We will be working diligently to ensure that all residency training programs in the Department pass the Royal College Accreditation cycle; we will aim to surpass

last year's record of grant capture and peer reviewed publications; we will continue to encourage all eligible faculty members to be promoted at the Decanal Committee; we will use aggressive advancement strategies to fund important Departmental initiatives; and we will implement the short term, year one goals of the Strategic Plan. Finally, when I write next year's Chair Report, it will be from a different office, as the Department of Surgery will be moving to a new site after almost 80 years of occupancy at the Banting Institute. More to follow along this journey together.

#### James T Rutka, MD, PhD, FRCSC

RS McLaughlin Professor and Chair



Gallie Day Gala Dinner, Royal York Hotel: James Rutka, Amanda Levine.



2 Gallie Day Gala Dinner: Dean Whiteside, James Rutka.







### Research

Ben Alman, Vice-Chair Research, A.J. Latner Professor and Chair in Orthopaedic Surgery

s surgeons, we remove diseased parts of the body or perform operations to improve the function of select organs. The field of regenerative medicine focuses on how we can harness the inherent ability of cells to rebuild body parts or improve the function of degenerating organs. Knowledge from regenerative medicine thus has tremendous potential to improve outcome in surgical patients. This includes using cells in tissue engineering to build new parts outside of the body and then surgically implant them, as well as harnessing progenitor or stem cells to repair or rebuild tissue in-vivo. Members of our faculty have made tremendous inroads into making regenerative medicine a clinical reality, and we learned of their work at this year's Gallie Day, whose theme was "Building Better Bodies: Regeneration and Tissue Engineering and Surgery".

The day included a symposium in which several of our faculty members reported on advances in diverse areas in regenerative medicine. Participants included Abdallah Daar (Chief, Science & Ethics Officer, Grand Challenges Canada, Professor of Public Health Sciences and Surgery, U of T), who spoke on how regenerative medicine can improve health internationally, and brought up some ethical issues related to the field. Rita Kandel (Chief, Dept of Pathology & Laboratory Medicine, Mount Sinai Hospital; Professor, Laboratory Medicine and Pathobiology, cross appointed to Surgery, U of T), spoke on the work of her team developing a biologic joint replacement, which could be a longer lasting solution to joint degeneration than conventional total joint replacements. Michael Sefton (University Professor, IBBME, Michael E. Charles Professor, Dept of Chemical Engineering & Applied Chemistry, U of T), spoke on rebuilding blood vessels and the importance of vascularity in regenerating multiple organs in the body. Thomas Waddell (Pearson-Ginsberg Chair, Division of Thoracic Surgery, Thomson Family Chair in Translational Research, Dept of Surgery, U of T), spoke on the use of multiple approaches in regenerative medicine to improve outcome in a variety of lung and respiratory disease. They demonstrated an impressive depth and breadth of work in this field, and gave a fascinating glimpse into how their work will revolutionize surgical care in the near future.

Pr Philippe Menasché, (Unité de Chirurgie Cardiaque, Hôpital Européen Georges Pompidou, Paris, France) was this year's GORDON MURRAY LECTURER. His talk was entitled, "Stem cells for the treatment of heart failure: What is still missing for a prime time use?". He outlined the journey that he and others took to study the

role of stem cells in cardiac regeneration, and develop their use in the clinic. In addition to his exciting talk and the impact of his work, he gave a touching thank you for his invitation, and for all the help Canada provided to France historically, especially in the Second World War.

There were 10 platform presentations and 46 poster presentations from trainees working with our faculty members. The Gallie Bateman Awards (for Surgeon Scientist Program participants) and the McMurrich Awards (for any trainee working with a member of the faculty of surgery) were judged for both platform presentations and poster presentations. The multiplicity of the topics and researchers highlighted the diverse, yet high quality, research being conducted in our Department.

The Gallie Bateman Award for best work by a trainee in the Surgeon Scientist Program 1st prize went to oral presentation by Jonathan Yeung: "Ex vivo lung perfusion for evaluation and repair of donor lungs for transplantation" (Supervisor: Shaf Keshavjee); 2nd prize tie went to Lakhbir Sandhu: "Separating the wheat from the chaff: Empirically identifying the characteristics of high quality non-randomized studies" (co-authors: George Tomlinson, Erin Kennedy, Alice Wei, Nancy Baxter, [supervisor: David Urbach]), for her poster presentation; Francis Zih: "Polo-like kinase 4 enhances cancer cell motility and invasion" (Supervisor: Carol Swallow), for his oral presentation; 3rd prize oral presentation award went to Nathan Perlis: "Radical cystectomy with perioperative chemotherapy vs. selective bladder preservation with radiation therapy for muscle--invasive bladder cancer: A decision analysis" (Supervisor: Antonio Finelli).

1st prize tie for the McMurrich Award (for research by a trainee not in the Surgeon Scientist Program) was awarded to **David Shih** (supervisor: Michael D. Taylor): "Genomic copy-number profiling identifies actionable targets in medulloblastoma subgroups"; and Shabana Amanda Ali (Alvin Lin, Heather Whetstone, [supervisor: Benjamin Alman]): "Identifying hedgehog signaling target genes in osteoarthritis using an optimized method for Rna extraction from human cartilage". 2nd prize three way tie: Julia Izrailit (supervisor: Michael Reedijk): "TRB3 regulates MAPK- and SMAD-dependant notch activation in breast cancer"; Wenxi Gao (supervisors: Mingyao Liu, Shaf Keshavjee): "Alpha 1-antitrypsin improves lung function in a rat lung transplantation model"; Elaine Mau (Yufa Wang, David Wright, David C.

Silkstone, Benjamin A. Alman Heather Whetstone, Cari Whyne, [supervisor: Diane Nam]: "T-lymphoctyes enable osteoblast maturation via il-17f during the early phase of fracture repair". 3rd prize four-way tie: Anna Bendzsak (Nancy Baxter, Gail Darling, Peter Austin, [supervisor: David Urbach]): "Within hospital change in surgical volume and operative mortality in lung cancer: does practice make perfect?"; Crystal Ruff (Hui Ye, Natasha Stribbell, Jean Legasto, Jian Wang, Liang Zhang, [supervisor: Michael Fehlings]): "Stem cell based transplantation strategies for perinatal sub cortical remyelination"; Kathryn Ottolino-Perry (Nan Tang, [supervisor: Judith Andrea McCart]): "Combined oncolvtic virotherapy and chemotherapy treatment of peritoneal carcinomatosis"; Âlenoush Vartanian (Abhijit Guha, [supervisor: Gelareh Zadeh]): "Metabolic modulation of glioblastoma multiforme (gbm) by depleting hexokinase II: Potentiating the effect of standard therapies".

Faculty research awards went to Mojgan Hodaie (Bernard Langer Surgeon Scientist Award, awarded to an outstanding graduate of the Surgeon Scientist Program in the Department, who shows the greatest promise for a career in academic surgery), Teodore Grantcharov (George-Armstrong Peters Prize, awarded to a young investigator who has shown outstanding productivity during his initial period as an independent investigator as evidenced by research publications in peer reviewed journals, grants held, and students trained), Albert Yee and Cari Whyne (Charles Tator Surgeon Scientist Mentoring Award, to recognize individual supervising participants in the SSP who emulate Professor Tator's qualities, namely excellence in research, commitment to SSP mentoring and dedication to promotion of Surgeon-Scientists) and Ren-Ke Li (Lister Prize, awarded to an investigator who has shown outstanding and continuing productivity of international stature as evidenced by research publications, grants held, students trained and other evidence of stature of the work produced).

Our high impact journal publications continue to grow by numbers. Our faculty has given research presentations throughout the globe and participated in over a hundred national and international research meetings. The increased competitiveness of research funding from the Canadian Institutes of Health Research, CCSRI, and other funding agencies continues. Despite this, our department members continue to receive new grant at an increasingly phenomenal pace from these agencies. Benjamin Alman, Nancy Baxter, Gregory Borschel, Christopher Caldarone, Sean Cleary, Timothy Daniels, Karen Davis, Michael Fehlings, Geoff Fernie, Anna Gagliardi, Steven Gallinger, Teodor Grantcharov, Sevan Hopyan, Andrew Howard, Keith Jarvi, Marc Jeschke, Andras Kapus, Paul Karanicolas, Shaf Keshavjee, Laurence Klotz, Wolfgang Kuebler, Wey Liang Leong, Ren-Ke Li, Mingyao Liu, Andres Lozano, Cindi Morshead, Avery Nathens, Sandro Rizoli, James Rutka, Emil Schemitsch, Hong-Shuo Sun, Michael D. Taylor, Vasu Venkateswaran, Cari Whyne, Thomas Waddell, and Toni Zhong, were among the great number of faculty who received new grants this year. Our total research funding continues to exceed that of even many of the

Universities in Canada, this year was over \$50,000,000.

We continue to train residents at the graduate level in research. We returned to our roots by renaming the program that trains our residents the Surgeon Scientist Training Program, its original name, We have over thirty residents participating this year. 94% of our Surgeon Scientist Training Program trainees were successful in receiving full or partial salary support from external granting agencies. Johnson & Johnson Medical Products funding support for the Surgeon Scientist Program provided funding to 5 trainees for 2011-2012, who were Ryan Alkins, Bheeshma Ravi, Sunjay Sharma, Megha Suri and Francis Zih.

The Departmental Research Committee continues its strong work on expanding the breadth of research activities in the Department, establishing links to emerging research areas, improving the links with the scientists in the Department, developing standardized evaluations for faculty, and optimizing the strengths of Gallie Day and research educational activities. A second scientist retreat was organized by Andras Kapus and Val Cabral on November 23, 2011. Steven Gallinger, Andrew Howard, and Thomas Waddell worked on the White Paper to be included in the Strategic Plan for the Department. This White Paper as well as the Scientist White Paper worked on by Andras Kapus from the Scientist Retreat, were used as starting points in the Departmental Strategic Planning Sessions.

Research will always play a leading role in our department and we have made astonishing accomplishments in the past year. There is no doubt in the upcoming years our research activities will continue to expand, with new avenues of investigation being developed, and improvements in our research infrastructure to increase the breadth and depth of our work, ultimately improving the outcome for our patients.

Special thanks to Val Cabral for her co-ordination of all aspects of the Departmental research activities.



4 Gallie Day Gala Dinner: Ori Rotstein, James Rutka, Robin McLeod, Ben Alman, David Latter.



### Postgraduate Education

Ron Levine, Director

he Department of Surgery at the Postgraduate level is the largest in Canada with 267 residents and 216 clinical fellows. There have been many accomplishments and successes in the 2011-2012 academic year.

There are 11 surgical programs: 7 CaRMS entry and 4 subspecialty programs after general surgery, as vascular surgery has now become a CaRMS entry program. The backbone of the 11 surgical programs is the Program Director and their administrative assistant. It is a huge thankless job to coordinate and maintain each of these surgical specialties.

There have been some changes with the program directors this year. Dr. Marcus Burnstein from Colorectal Surgery and Dr. Gail Darling from Thoracic Surgery have stepped down and have been replaced by Dr. Helen MacRae and Dr. Andrew Pierre respectively. These new program directors will continue to maintain their respective programs at a very high level and will also bring new initiatives to their specialties.

Dr. Dimitri Anastakis took on a position of Vice Dean of Continuing Education and Professional Development (CEPD) and because of this stepped down as the chairman of Plastic and Reconstructive Surgery. Dr. Christopher Forrest has been the acting interim chairman of Plastic and Reconstructive Surgery and has done a superb job with a nearly seamless transition.

Dr. Jim Rutka has finished his first year as Chair of the Department of Surgery. He has done an excellent job and has brought new initiatives to the department; one of the major ones being a new strategic plan for the department for the next five years.

Our surgical positions for all of our CaRMS entry specialty programs are sought after by medical students from across Canada. This year all CaRMS entry surgical positions were filled in the 1st reiteration. Most of these positions were filled with our top ranked applicants. Many of the surgical specialties also take IMG's (International Medical Graduates) and visa trainees from around the world.

The first two years of training in surgery is known as the Fundamentals of Surgery. Besides attending specialtyspecific academic endeavors, the Fundamentals of Surgery residents attend the Principles of Surgery (POS) lectures to prepare them for the POS Royal College Exam. These weekly seminars are coordinated by Dr. Robert Mustard. Dr. Mustard also organizes practice exams. The high success rate of our students at the POS Exam is a testament to all of Dr. Mustard's hard work.

Another important part of the postgraduate curriculum in all specialties is the Surgical Skills Lab at the Mount Sinai Hospital. All PGY1 residents attend a one year surgical skills courses where they learn fundamental surgical skills. Each of the surgical specialties also run their own courses where surgical skills specific to their specialty are taught. Lisa Satterthwaite is the Manager of this unique skills lab. Dr. Oleg Safir has been named the new head of the Surgical Skills Lab and he is going to bring many new improvements to the Surgical Skills Lab.

There are a number of academic days to enhance the educational experience of the surgical resident. In July the Core Surgery residents attend "The Surgeon in Society" where medical legal issues are discussed. This is run by Dr. John Bohnen and Dr. Ron Levine. Dr. John Murnaghan runs "Residents as Teachers" for the PGY1 and PGY3 residents. This is a workshop to teach our residents to be better teachers. There is an orientation day organized by Dr. Ron Levine for all of our new first year residents. All of our first year residents attend the ATLS course coordinated by Dr. Jameel Ali at St. Michael's Hospital.

Case logging on POWER is now mandatory for all surgical residents. The Program Directors can monitor the operating experience of the learner at each hospital and can compare the experience from one hospital to another using the data from POWER case logging.

PGCoreEd is a series of interactive modules based on the CanMEDS Roles. Each module takes 4 to 5 hours to complete and there is an exam at the end of each module. The results of the exams are provided to the resident, Program Director and Director of Postgraduate Education. Successful completion of 8 modules is required for all residents finishing their PGY2 year.

The University of Toronto, the Royal College of Physicians and Surgeons and the Ministry of Health have all mandated an increased community experience for our residents. This mandate is called Distributed Medical Education. To meet this mandate the Department of Surgery has increased the number of residents going to community hospitals. At the present time residents are going regularly to St. Joseph's Health Centre, Toronto East General Hospital, North York General Hospital, Humber River Regional Hospital, William Osler Heath Centre, Credit Valley Hospital, Trillium Health Centre and South Lake. The feedback from residents rotating through these community hospitals has been excellent.

The Competency Based Curriculum in Orthopaedic Surgery continued for the academic year 2011-2012. Three new residents were accepted into the program and thus far it seems to be extremely successful due to the hard work of the Division of Orthopaedic Surgery. Educators from around the world are awaiting the results of this program.

There was a retreat for new faculty in June that was coordinated by Dr. David Latter. It was highly successful and the plan is to continue this retreat. The Department of Surgery will be alternating it on a yearly basis with a faculty development day on how to be a better teacher.

The fellowship programs in the Department of Surgery are extremely important. Not only do the fellows learn important skills that they take back to their countries of origin, but they all bring their experiences from around the world to our residents and medical students. At the present time we have 216 fellows in the Department of Surgery. The fellowship committee under the leadership of Dr. David Latter has moved to formalize all the fellowships in the Department of Surgery with definitive goals and objectives and uniformity of salaries for each fellowship. In an effort to improve the social environment for our clinical fellows and their families the Department hosts an annual BBQ in August specifically inviting spouses and children so that the families can get to know each other.

The Women in Surgery group is now under the leadership of Dr. Carol-Anne Moulton. The group met twice this year. This group discusses issues of finding the balance of family life with a surgical career. It is well attended by medical students, residents and faculty.

Dr. Peter Ferguson was awarded the 2012 Bruce Tovee Award for Postgraduate Teaching. The 2012 D.R. Wilson award for Resident Teaching of medical students was won by Dr. Marilyn Heng.

The running of the Department of Surgery with 267 residents, 216 fellows and 265 faculty members is a huge endeavor. This is masterfully done by Tess Weber and Robert Gardin.



5 Tovee Postgraduate Prize: Ron Levine, Peter Ferguson.





### Undergraduate Education

George Christakis, MD Director, Undergraduate Education

011-12 has been typical of a restructuring year for undergraduate education. After eight years of hard work marked by substantial and successful changes to the program, David Backstein stepped down as Director of Undergraduate Education. Also, after more than 25 years of exceptional service, Carmela Calorendi, undergraduate coordinator, retired. Shibu Thomas took over from Carmela and I assumed David's role as director in September 2011.

A mini retreat for undergraduate education headed by Drs. Rutka and Latter took place in late September 2011. Information provided by the student questionnaire in preparation for the medical school accreditation in May 2012, was helpful in creating new ideas as well as promoting the goals and objectives for education in surgery. Recommendations were also made at the mini retreat for changes in the crash course as well as the promotion of new leaders in undergraduate education to improve communication and teaching of clinical clerks. The conclusions from the mini retreat were that undergraduate surgical education will continue to be valued as an important contributor to the Department of Surgery and will be recognized through promotions, practice plan points as well as financial reimbursement. The strength of this support for undergraduate education was further reinforced in the Department's Strategic Plan meeting in Jan 2012.

'Crash Course in Surgery' week: Taking into account general feedback from students, effective March 2012, the Crash Course hours were reduced (from 8:00 a.m. - 6:00 p.m. to 9:00 a.m. - 5:00 p.m.), thereby slashing 10 hours off the week-long course while still retaining all critical content. Furthermore, starting September 2012, in order to accommodate and make allowances for students coming from the Mississauga Academy of Medicine, the crash course hours will be changed to 10:00 a.m. - 6:00 p.m.

The method of teaching in the crash course has also changed. The didactic form of lectures was gradually replaced over the year with 'case-based clinical questions' and 'interactive sessions.' Starting November 2011, selected crash course sessions have been videorecorded and uploaded to the portal for 24x7 student access. A new learning module called 'Introduction to the NBME examination, was included in the crash course schedule. In this session, students are taken through a sample NBME examination over a period of three hours in order to prepare them for their end-ofrotation written examination. This was introduced during the first week to allow the students to familiarize themselves to the types of clinical scenarios they may encounter while on their clinical sub-rotations. Students are being provided with an NBME study book as well.

Clinical sub-rotations: During this academic year, with the help and support of each hospital-based academy, we have instituted a formal, standardized communique that goes to each preceptor, just before a clinical clerk is to come to their service. The letter details the roles and responsibilities of the preceptor as well as providing relevant information, including a picture, of the clerk. In addition to this, monitoring of each clerk's T-Res progress is done at the Undergraduate Education office. If a lapse or lack of progress is observed, actions are instituted to ensure that the student is offered the opportunity to achieve these mandatory experiences. As a result, we are happy to report 100% compliance in the completion of T-Res requirements over this past year.

Organizational changes: The Undergraduate Education Committee was expanded by 75% in 2011-12 in order to allow for more site representation. The Committee also created a larger committee for undergraduate education known as the Surgical Leaders of Undergraduate Education (SLUE). Each surgical division has appointed a divisional director for undergraduate education who will collaborate with other SLUEs in their division. There is now a SLUE from every division at every hospital. In this way there will be a facilitator for undergraduate education representing every division at every hospital site. These committed and enthusiastic surgeon/ educators will facilitate every clerk's sub-rotation. The SLUEs will also be compiling and completing a handbook for their specialty which will be site non-specific and will have all the information necessary for a clerk's subrotation on their service. Furthermore, these handbooks will contain the basic objectives and requirements of/ for a clerk as well as essential information that any physician should know. The SLUEs will be also responsible for several other important initiatives such as review and revision of educational objectives for every surgical specialty, continuing development of the undergraduate surgical curriculum, etc.

Resident Leaders of Undergraduate Education: While conducting a review of surgical undergraduate education, it quickly became apparent that a great majority of the teaching that occurs is performed by surgical residents. It is also clear that there exists in this

group, a large number of exceptionally good teachers who have not been effectively used for student teaching. For this reason, and in conjunction with the Director, Postgraduate Education, an attempt has been made to increase and enhance the involvement of residents in their teaching roles. Clearly resident interaction with the clerk plays a vital role in the success of a clerk's educational experience. With the help of the Director, Postgraduate Education and the Program Directors, we are in the process of identifying a core cadre of committed and enthusiastic teacher residents that will form the 'Resident Leaders in Undergraduate Education.' This group will be analogous to the SLUE. Their responsibilities will include, formalizing a handbook on how to teach clerks as well as taking responsibility for education of their resident colleagues in the methodology and organizational aspects of teaching clerks.

Objectives for 2012/13: The Undergraduate Education office has had multiple meetings with leaders, surgical site leads, SLUEs and potential surgical teaching faculty at the Mississauga Academy of Medicine (MAM). We have been extremely encouraged by the very positive response and sense of commitment from the surgeons at both hospital sites at MAM. We expect the rotations due to commence in September 2012 to be very highly rated by the students.

We hope to see Resident Leaders of Undergraduate Education group formalized and evolve in this year. It is expected that they will play a major role during the Crash Course week as well as at site specific teaching sessions.



Strategic Planning Committee Members: James Rutka, Carol Swallow, Ron Levine, Darina Landa, George Christakis, Paul Karanicolas, Lakho Sandu.

8 Kergin Lecture. Feb 3, 2012: John Semple, Thomas Waddell, David Sugarbaker, Shafique Keshavjee





# Continuing Education and Professional Development

Terry Axelrod Director and Chair, and Professional Development Committee

#### **OVERALL CEPD GOALS**

- Promote best practices in continuing education and professional development (including Faculty Development, CHE Professional Development)
- · Foster scholarship and research in continuing education
- Broaden the scope and inclusiveness of continuing education (including international, interprofessional)
- Reinforce infrastructure and funding base (including COI, industry relations)

#### **2011-12 ACTIVITIES**

- 27 CE events run through the CEPD office, either fully or partially with accreditation only
- 23 live meetings, 3 faculty development, 1 research-
- Superb success with enrollment in the hundreds for several courses, such as the Update in General Surgery 2012, Urology Update 2011, etc.
- Many faculty members involved as Chair and faculty in CE events nationally and internationally outside of the CEPD jurisdiction

#### **OBJECTIVES FOR 2012-13**

- Encourage all Divisions to run or accredit courses through CEPD office.
- Catalogue the National and International CE that is done outside of the CEPD office
- Improve the support provided through the Department of Surgery for CE events
- Encourage the development of more Web based programmes.



9 Suture Workshop for medical students



## Surgical Alumni Association

Martin Barkin, President

The Surgical Alumni Association steering committee members are:

Dr. Andrew Bruce, Dr. Bernard Goldman, Dr. Tirone David, Dr. Griff Pearson, Dr. Hamilton Hall, Dr. Jacob Langer, Dr. James Waddell, Dr. Joseph Schatzker, Dr. Richard Reznick, Dr. Dr. Charles Tator, Dr. Wayne Johnston, Dr. Zane Cohen, Dr. Dimitri Anastakis, Dr. Bernard Langer, Dr. John Wedge

In 2012 the Association participated in and contributed to the formation of the Strategic Plan for the department of Surgery that was led by the Department Chairman, Dr. James Rutka.

The Surgical Alumni Database has been integrated with the Alumni Data base of the Faculty of Medicine.

In order to better understand the needs of our surgical alumni, 2012 saw the preparation of a comprehensive questionnaire that was sent to all alumni on our updated data base in early 2013.

We are currently reviewing these responses and will formally present the finding to the Chairman in May. Based on these responses we will direct the efforts of the steering committee to meeting these needs and expectations.

As always, your Surgical Alumni Association is, once again, prepared to provide strong support to the Department and its Chair, Dr. James Rutka.



10 Past Chairs of the Department of Surgery: Richard Reznick, Bernard Langer, Donald Wilson, John Wedge, James Rutka, David Latter.



# Office of International Surgery

Andrew Howard, Director

#### **OVERVIEW**

The Office of International Surgery is founded on the belief that improving access to surgical care in low income countries has a great potential to reduce the global burden of disease. The role of a University Department of Surgery within the global health field should be a scholarly role, emphasizing education and research. Provision of clinical care supports these activities within some of our projects.

#### **ONGOING PROJECTS**

#### **Ptolemy Library Project**

Through a partnership with the University of Toronto Libraries, the Office of International Surgery continues to provide free full text access to the University of Toronto Library to surgeons and surgical trainees in low income countries. Our librarians, Sandra Kendall at Sidney Liswood Library, and Warren Holder and Sian Miekle at Robarts, have trained clinicians and librarians in Ethiopia and the scope of the project will be expanded to cover the needs of the Toronto Addis Ababa Academic Collaboration (TAAAC).

#### Surgery in Africa Reviews

We continue to publish narrative reviews on a broad range of surgical topics focusing on clinically relevant aspects of surgery in resource constrained settings. Contact andrew.howard@sickkids.ca if you are interested in writing a review. Reviews, dating back to 2005, are online at www.ptolemy.ca/members. A plan for the coming year is to put on a series on surgical critical care and trauma. The College of Surgeons of East, Central, and Southern Africa now uses our reviews as a mandatory component of their residency curriculum.

#### Bethune Round Table on International Surgery

This annual Canadian academic meeting is one of the first to focus on surgical aspects of global health. In 2012, the University of Toronto hosted a successful meeting with 150 registrants on May 25 to 27th. The University of Toronto has hosted 8 of the 13 Bethune Round table meetings which have become internationally recognized. A unique aspect of this meeting is the large number of presenters who come from low income countries thanks to scholarship money raised. This year we hosted 13 scholarship recipients.

#### **Toronto Addis Ababa Academic Collaboration**

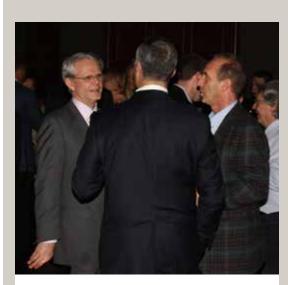
Many departments at U of T are linking with AAU to strengthen the teaching and academic collaboration at both institutions. CIDA is currently reviewing the project for future substantial funding.

#### **Global Health Education Institute**

The department of surgery is a participant, in conjunction with anaesthsia and obstetrics, in teaching residents from across U of T who are taking the Global Health Education Institute course directed by Dr. Barry Pakes, and emergentologist from Sunnybrook. A skills lab sessions has been added to the 2011 course, dates are October 20th through October 22, 2011.

#### **Prakash Foundation LINCS Scholarships**

The Prakash Foundation Low Income Country Surgical (LINCS) Scholarships allow trainee surgeons to pursue fellowships or portions of a residency at University of Toronto. Scholarships will be offered beginning in 2013 and initially up to \$70,000 per year. Applicants will be selected based on academic potential in the home country upon return and acceptance by a surgeon or division in Toronto. Contact andrew.howard@sickkids.ca for more information.



11 2011 Annual Holiday Party.



### **Division Of Anatomy**

Cindi Morshead, Chair

he Division continues to meet the diverse educational needs of students from many programs including Medicine, Residents, Dentistry, Physical Therapy, Occupational Therapy, Speech and Language Pathology, Pharmacy, Physicians Assistant Program, Biomedical Communications, Physical and Health Education, and Arts & Science. Our current faculty is following in the tradition of developing innovative approaches to teaching and this year saw the launch of an online Anatomy course that was developed in collaboration with the Department of Physiology.

Faculty research accomplishments are equally impressive. Despite the increased competitiveness of research funding, the Division continues to achieve awards, funding and accolades in support of their research endeavours. Two members of the Division filed patents related to their innovative work in neural regeneration (P Koeberle – Novel Peptides and methods and uses thereof for preventing retinal disorders; CM Morshead, MS Shoichet and 4 others - Methods and devices for local delivery of an agent to the brain).

#### **PROMOTIONS**

Dr. Paulo Koeberle was awarded tenure and was promoted to Associate Professor.

#### **RESEARCH GRANTS** funded in 2011-2012 academic year

PHuman: Parametric multiscale modeling and simulation of human anatomy. Fels S, Agur AMR, Abolmaesumi P, Singh K. *Khan A, Autodesk Canada Inc. NSERC Collaborative Research and Development Grant.* (\$480,000 2012-2015).

Focal Adhesion Kinase: A pivotal role in CNS apoptosis and regeneration. *Koeberle PD. CIHR*. (\$554,525 2012-2017).

Molecular interaction that modulate P13 Kinase and MAP Kinase pathways during Apoptosis. *Koeberle PD. NSERC Discovery Grant.* (\$130,000 2012-2017).

Bioengineered cell delivery systems. Shoichet MS, Morshead CM, Tator CH, van der Kooy D. NSERC/CIHR Collaborative Health Research Program. (\$658,000 2011-2014).

Repairing the injured spinal cord. Fehlings MG, Morshead CM, van der Kooy D, Shoichet MS, Nagy A. Krembil Foundation Research Grant. (\$1,500,000 2011-2014).

Promoting self-repair of the stroke injured brain using neural stem cell stimulation and rehabilitation. Morshead CM, Shoichet MS, Corbett D. Heart and Stroke Foundation. (280,000 2012-2015).

Novel biotechnology for moedulation of the neurovascular niche to promote regeneration and rehabilitation after ischemic stroke. *Corbett D, Morshead CM, Shoichet MS. Canadian Stroke Network Collaborative Research Initiative.* (\$202,500 2012-2013).

Advances in Cerebral Palsy: Cell to Person. Fehlings D, Morshead CM, van der Kooy D, Fehlings MG. Ontario Brain Institute. (\$2,000,000 2012-2014).

Cellular and Molecular mechanisms of stroke in diabetes and its potential therapeutic treatments. *Sun HS. Canada Foundation for Innovation, Leaders Opportunity Fund.* (\$120,000 2012-2017).

#### **GRADUATE STUDENTS & AWARDS**

Congratulations to Ms. Christine Bae who received her MSc under the supervision of Hong Sun.

Ms. Nadia Sachewsky (PhD candidate – supervised by Cindi Morshead) was the recipient of the CIHR-TPRM scholarship. Nadia was also a finalist for the Laidlaw Manuscript Competition at Scientific Research Day in IMS.

Mr. Dave Piccin (PhD candidate – supervised by Cindi Morshead) the Recipient of *Eureka's 4th Annual International Certificate Program award* (2012). Dave had the opportunity to travel to Italy and participate in this international training program in translational medicine and career mentoring designed for young "high potential" professionals.

Mr. Robert Babona-Pilipos (PhD candidate – supervised by Cindi Morshead) was the recipient of the NSERC-CREATE CARE studentship.

Faculty welcomed many new and award winning graduate students to our Division:

Mr. Anton Semechko and Mr. Zhi (James) Li - supervised by Anne Agur

Ms. Kristina Wakimoto (supervised by Anne Agur). Kristina is the recipient of a SIRF grant fromHumber College (\$7,032) and a grant from the Opportunities to Innovate, Higher Education Quality Council of Ontario. 2012-13 (\$8,323) for "The effectiveness of the antomy glove learning system in the training of massage therapy students" (2012-13).

Ms. Megan Lysko and Mr. Philip Donofrio - cosupervised by Anne Agur and Paulo Koeberle

Ms. Parvati Dadwal - supervised by Cindi Morshead. Parvati received an IMS entrance scholarship.

Mr. Andrew Chow - supervised by Cindi Morshead. Andrew was awarded an Ontario Graduate Scholarship and an IMS entrance scholarship.

### FACULTY HONOURS/AWARDS/POSITIONS HELD

Anne Agur was appointed to the Division of Physiatry, Department of Medicine, Faculty of Medicine at the University of Toronto.

Cindi Morshead was appointed as Graduate Coordinator in the Institute of Medical Science.

Anne Agur was appointed President of the American Association of Clinical Anatomists.

Anne Agur received the Department of Occupational Science and Occupational Therapy Exellence in Teaching Award in recognition of her sustained teaching excellence.

Mike Wiley was awarded the Harry Whittaker Memorial Teaching Award in the Faculty of Medicine in 2012. The award is decided upon annually by the students of the first year medical class and awarded to a lecturer, demonstrator or tutor who gave encouragement and displayed genuine concern for student well-being and, through personal commitment to quality teaching, provided practical and clear insights in the basic sciences during the first year of the undergraduate medical program.

Ian Taylor was the recipient of the Dr. E. Mary Hollington Pre-Clinical Teaching Award. The Dr. Mary Hollington Excellence in Pre-clinical Teaching Award is presented to a teacher who has demonstrated excellence in the preclinical undergraduate medical education curriculum as selected by 4th year students.

Hong Sun received the "Outstanding Professional Alumni Award" from Sun Yet-Sen Univ ZhongShan Med School.

Hong Sun was the Guest Editor for Acta Pharmacologica Sinica on Special Topic of Stroke.



12 The Harland Smith Lecture, March 29, 2012: Cindi Morshead, Michael Fehlings, Daniel Riew, Andres Lozano.



## Division of Cardiac Surgery

Christopher Caldarone, Chair

he Division of Cardiac Surgery enjoys a reputation for excellence in terms of clinical care and research with one of the largest combined clinical volumes in North America. The Division has made strong advances in the development of new surgical strategies including complex hybrid aortic procedures, trans-catheter aortic valve replacement, and hybrid management for neonatal single ventricle palliation. Our basic science, translational, and clinical research publications remain strong with a large proportion of the staff maintaining peer-reviewed funding for their research agendas.

The Division of Cardiac Surgery residency training program continues to attract top candidates from across Canada under the guidance of our Program Director, Dr. Gideon Cohen. We also developed the post of Fellowship Director with Dr. Stephanie Brister to improve the quality of our clinical fellowships across our four constituent hospitals.

The Division of Cardiac Surgery has led a broad multidisciplinary initiative to create a Cardiovascular Data Management Center (CVDMC) to develop a linkage-rich aggregation of databases for every patient with cardiovascular disease. The CVDMC will create a central database housed at the Hospital for Sick Children for quality improvement and research purposes for all members of the University of Toronto community of clinicians and researchers dedicated to cardiovascular disease. The data will be managed by a team of statistical and publication support personnel with the objective of providing quality improvement data to help improve care of our patients and to increase academic productivity by eliminating barriers to conducting clinical and translational research. The CVDMC has been generously funded by the Heart & Stroke Richard Lewar Centre of Excellence in Cardiovascular Research. Operational funds are also garnered through provision of statistical consulting work by the CVDMC team.

Under the leadership of Mark Peterson, Viv Rao, Andrew Dueck (Vascular Surgery), and Tim Bradley (Cardiology) the Toronto Aortic Collaborative (TAC) was formed. The purpose of the TAC is to establish a working group of specialists in Toronto dedicated to clinical care and research focused on aortic diseases. The goals of the TAC are to improve on the quality of care delivered to patients with complex aortic pathology, to foster collaboration between U of T hospitals, and to promote research and education in the area of aortic diseases. The TAC hosted a lecture by John Ikonomidis, a world reknown expert in surgical management of aortic pathology.

#### **EVENTS**

The Division of Cardiac Surgery held a Biannual Retreat in November 2011. A dominant theme was integration of clinical activities and data collection.

The inaugural Annual Cardiac Fellowship Dinner was held for the Cardiac Surgery Fellows, hosted by the Division's Fellowship Director, Dr Stephanie Brister. The dinner is part of an ongoing effort to forge closer links between Cardiac Surgery Fellows across the University of Toronto.

The 16th annual Terence Donnelly Cardiac Residents Research Day was held on April 21, 2012 and was attended by Cardiac Surgical Residents across Canada. This event is an annual highlight for aspiring surgeon-scientists among the Canadian residency programs and is the generously supported by Mr Terence Donnelly and organized by Dr. Lee Errett. The event was honored with a presentation by **Nimesh** Desai on contemporary management of aortic arch aneurysms. The program was also interspersed with presentations by members of the University of Toronto Division of Cardiac Surgery including Gideon Cohen, George Christakis, Chris Feindel, Subodh Verma, Steve Fremes, and Mark Peterson.

#### RECRUITMENT

Ed Hickey joined the Division starting in July 2012 as a staff surgeon at the Hospital for Sick Children. Dr Hickey served as the Kirklin/Ashburn Fellow in the Congenital Heart Surgeons Society Data Center during his residency and completed a clinical fellowship at the Hospital for Sick Children.

#### PROMOTIONS/APPOINTMENTS (alphabetical)

George Christakis was appointed Director of Undergraduate Medical Education for Surgery at the University of Toronto.

Ed Hickey was appointed as the Director of Undergraduate Education for the Division of Cardiac Surgery at the University of Toronto.

Vivek Rao was appointed as Head of the Division of Cardiac Surgery at University Health Network. Dr Rao succeeds Tirone David who led the Division to international prominence as a world-recognized center for innovation in cardiac surgical techniques and research.

#### FACULTY HONOURS/AWARDS (alphabetical)

#### Staff Teaching Awards

George Christakis was the recipient of the Bernard Goldman Award for Excellence in Cardiac Surgery Teaching.

David Latter was the recipient of the James Yao Award for Excellence in Cardiac Surgery Teaching.

Ren-Ke Li was honored as the 2012 recipient of the Lister Prize in the Department of Surgery which is the highest honor bestowed upon a member of the Department of Surgery for research.

Glen Van Arsdell was the recipient of the William G. Williams Award for Excellence in Cardiac Surgery Teaching.

Subodh Verma was renewed as a Canada Research Chair for an additional five years

Terry Yau was the recipient of Lynda L. Mickleborough Award for Excellence in Cardiac Surgery Teaching.

#### **FACULTY GRANTS** (alphabetical)

Stephanie Brister holds a grant from the Heart and Stroke Foundation of Canada (An RCT of Women's Adherence to Women-Only, Home Based and Traditional Cardiac Rehabilitation).

Christopher Caldarone holds a grant from the Heart and Stroke Foundation (Randomized Trial of Hybrid and Norwood Single Ventricle Palliation) and the Saving Tiny Hearts Foundation (Pulmonary vein stenosis is congenital heart disease). Dr. Caldarone continues to manage the finances of the CHSS Datacenter.

Gideon Cohen continues to hold two grants from the Cardiothoracic Surgery Network (NIH/CIHR).

John Coles holds a grant from the Ministry of Health of Ontario (Cardiovascular Biomarker Discovery and Validation) and the Garron Family Cancer Centre (Repurposing of FDA-approved drugs to prevent cardiotoxicity in cancer chemotherapy).

Stephen Fremes holds four grants from the Canadian Institutes of Health Research (Steroids in Cardiac Surgery Trial, CABG Off or On Pump Revascularization Study, Transfusion Requirements in Cardiac Surgery, Canadian Network and Centre for Trials Internationally) and the Heart and Stroke Foundation (Improving the Assessment and Treatment of Severe Aortic Stenosis by Evaluating Care Gaps and Advancing Risk Predictions, Superior SVG Patency Trial-Surgical and Pharmacological novel in Interventions to Improve Overall Results of Saphenous Vein Graft Patency in CABG Surgery: An International Multi-centre RCT).

Osami Honjo holds one grant from the Labatt Family Heart Centre (Establishment of mechanically-assisted primary cavopulmonary connection physiology in infantile piglets: A proof of concept animal study) and one grant from the University of Toronto Roscoe Reid Graham Scholarship in Surgical Science (Age-dependant vulnerability of developing brain to cardiopulmonary bypass-associated hypoperfusion and ischemia in neonates and infants undergoing congenital heart surgery).

Fuad Moussa holds one grant from the JP Bickell Foundation (Usability Testing of Virtual and Usable Resources for Training Off Pump for Coronary Artery Bypass Surgery) and one grant from SEAC Education Research and Scholarship (Developing and Evaluating a Simulation Based Program for Treating Off Pump Coronary Artery Bypass Surgery).

Mark Peterson holds one grant from the SMHA Innovation Funds (TAC-CALL: Thoracic Aortic Care - Comprehensive Aortic Care on-Line From Acute Presentation to Long-Term Follow Up) and one grant from the Canadian Institutes of Health Research (Frailty Assessment Before Cardiac Surgery and Transcatheter Interventions).

Vivek Rao holds a grant from the Heart and Stroke Foundation of Canada (Prognostic Role of Endothelial Progenitor Cells in Patients with Heart Failure) and one grant from the UHN/MSO Academic Medical Organization Innovation Fund Competition (Use of Volatile Anaesthetics for Long Term Sedation in Critically Ill Patients).

Glen Van Arsdell holds one grant from the Heart and Stroke Foundation of Ontario (Can Sustained Post-Operative Biventricular Pacing Improve Hemodynamics in Children with Electro-Mechanical Dyssynchrony After Surgical Repair of Congenital Heart Disease?) and one from the Canadian Institutes of Health Research (Clinical Assessment of Thrombosis in Children after Heart Surgery: The CATCH study).

Subodh Verma holds two grants from the Heart and Stroke Foundation of Ontario (Elucidating the Role of MicroRNA-145 in Atherosclerosis, Surgical and Pharmacological Novel Intervetions to Improve Overall Results of Saphenous Vein Graft Patency in CABG Surgery: An International Multi-Centre RCT), one grant from the Canada Foundation for Innovation (Zebrafish Centre for Advanced Drug Discovery: A High Throughput Screening Platform for Targeting Cardiovascular Disease), one grant from AstraZeneca Canada (Primary cARe AuDit of Global risk Management: PARADIGM Study), one grant from Physicians' Services Incorporated Foundation (Elucidating the Role of Birt-Hogg-Dube in Adverse Cardiac Remodelling), one grant from the Canadian Institutes of Health Research (Canada Research Chair in Atherosclerosis) and one grant from Bayer AG (Current Trends in the Management of Atrial Fibrillation in Canadal.

Richard Weisel holds a grant from the Innovation Fund of the Peter Munk Cardiac Centre (The Next Generation of Cell Therapy) and a grant from the Canadian Institutes of Health Research (Ultrasound Targeted Gene Delivery to Enhance Cell Engraftment in the Aged Heart After Ischemic Injury). Terrence Yau holds a grant from the Heart and Stroke Foundation of Ontario (Electrophysiological Implications of Regenerative Therapy), one grant from the Ryerson New Faculty SRC Development Fund (Facilitators and Barriers to Effective Discharge Following Open Heart Surgery: Patients' and Nurses' Experimental Accounts), one grant from the Innovation Fund (Improving Transfusion Practice and Clinical Outcomes in Cardiac Surgery), two grants from the Canadian Institutes of Health Research (Screening for Dysphagia in Patients Following Prolonged Intubation:

Validation of the Toronto Bedside Swallowing Screening Test, The Design and Planning of a Randomized Controlled Trial to Evaluate a Tailored Cardiovascular Surgical Patient Education Intervention in Reducing Post-Hospital Discharge Complications and Readmission Rates), and one grant from the Peter Munk Cardiac Centre Innovation Committee (Cardiac Regeneration – The Next Generation of Cell Therapy).

#### RESIDENTS AND FELLOWS HONOURS/ AWARDS (alphabetical)

**Saswata Deb** under the mentorship of **Steve Fremes** was awarded a 2012 Canada Vanier Scholarship which involved a steep 4-level multidisciplinary competition across Canada

**Praphulla Shukla** under the mentorship of **Subodh Verma** was honored as a finalist in the 2011 American Heart Association Vivien Thomas Young Investigator Award for his paper entitled "MicroRNA- 145 is a novel regulator of atherosclerosis"

#### **New Residents**

The Division of Cardiac Surgery welcomes Rachel Vanderlaan as our newest Cardiac Surgery Resident.

#### **VISITING PROFESSORS** (alphabetical)

James Cox presented the 2011 Heimbecker Lecture entitled "25 Years of Surgery for Atrial Fibrilation" Nimesh Desai presented "Contemporary Management of Aortic Arch Aneurysm: Penn Approach" at the Terrence Donnelly Day on April 21, 2012.

**John S. Ikonomidis** presented "Proteinase Systems and Thoracic Aortic Aneurysm Progression" as a Distinguished Visiting Professor on March 26, 2012.

**Sidney Levitsky** presented the 2011 Bigelow Lecture entitled "Healthcare Inflation: Evidence based medicine vs the Medical-Industrial Complex"

Philip Menasche presented "Stem cells for heart failure: Roadblocks that still impede broad clinical applications" St. Michael's Hospital Research Grand Rounds on June 25, 2012



13 **Gallie Day Gala Dinner:** Alex Mine Jazz Quartet

14 The John Palmer Lecture: Paul Greig, Michael Choti, Ori Rotstein.





## Division of General Surgery

Andy Smith, Chair

he academic footprint of the Division of General Surgery is significant and the individual hospital divisional reports in this volume demonstrate the hundreds of papers, grants and honors achieved in 2011-12. Below, I have attempted to highlight some important milestones and themes that reflect the work of our team as considered through the lens of the new departmental strategic plan.

#### **EDUCATION**

The Division of General Surgery continued to embrace and expand its role in education at all levels.

In undergraduate education, Darlene Fenech was appointed the Director of the Mechanisms, Manifestations and Management of Disease course at the Medical School. MMMD is a 36 week course which runs throughout the second year of medical school and it is unprecedented that a surgeon has been appointed as leader of the course. Jaime Escallon was appointed city-wide Divisional Director of the Surgical Clerkship. Georges Azzie won the 2012 Tovee Award (Undergraduate) at Gallie Day and Tulin Cil won the Wightman-Berris Undergraduate Education Award.

Program Director Najma Ahmed and the Division of General Surgery proudly welcomed 13 new PGY-1 residents including Jason Booy, Veronica Liang, Andras Fesco, Stephanie Mason, Dan Kagedan, Petra Wildgoose, Josh Kamstra, Stephanie Ramkumar, Ricky Jrearz, Nikki Hoffman, James Jung, Maeve Trudeau, and David Berger Richardson. At the same time, 14 residents were graduated from the Gallie Program at the 2012 Annual Assembly in May, Tthey included Syed Ali, Kengo Asai, Kalkidan Belay, Danielle Bischof, Joslin Cheverie, Preeti Dhar, Elisa Greco, Aliyah Kanji, Steve McLellan, Carmen Mueller, Sergio Muraca, Justyna Wolinska, Simon Yang and Saquib Siddque.

Dr. David Rattner from Harvard was the Tovee lecturer at the 2012 Assembly.

The residency program was evaluated through an internal UofT review which highlighted the unmatched array of opportunities for learners in the program led by Najma Ahmed. The report also highlighted contemporary issues that we will address including "physician extenders" and duty hours.

Surgical fellowships are becoming increasingly rigorous and well defined and the Division responded to this by appointing Paul Grieg to provide overarching leadership of the 8 formal, accredited fellowships. Paul is leading a team of fellowship program directors to foster

collaboration and appropriate integration between the various fellowships at U of T. Of note, Marcus Burnstein passed the baton of leadership of the world renowned colorectal fellowship to Helen Macrae after 16 years in the lead role.

The publication of the **U** of **T** Surgical Oncology Manual by the faculty and fellows of the Surgical Oncology Fellowship was a highlight of the year. Frances Wright, Jamie Escallon, Moises Cukier and Amy Gilles led this superb effort.

The Division continued to produce a wide array of continuing education courses highlighted by the 52nd Annual Update in General Surgery, held at the Royal York Hotel. Over 500 surgical professionals attended the event which focuses on practical topics in General Surgery. Presentations were well evaluated and attendees commented on the role the course plays as a focal point for the General Surgery "community of practice" in Ontario and across Canada. Fourteen surgeons from British Columbia attended for example.

#### **RESEARCH AND INNOVATION**

The Division continued to achieve at a high level as evidenced by papers published, grants captured and awards received. The individual Divisional reports in this report enumerate a comprehensive listing of these achievements. Special note should be made of Teodor Grantcharov having won the George Armstrong Peters **Award** for his record of leading scholarship in surgical education. The Division continues to boast a number of Surgical Scientists residents working in diverse research environments. It was noteworthy that General Surgery residents made a big impression at Gallie Day winning the Gallie-Bateman awards.

#### 1st Place - Jonathan Yeung

"Ex vivo lung perfusion for evaluation and repair of donor lungs for transplantation". Supervisor: Shaf Keshavjee

#### 2nd Place - Lakhbir Sandhu

"Separating the wheat from the chaff: empirically identifying the characteristics of high quality nonrandomized studies".

Supervisor: David Urbach

#### 2nd Place - Francis Zih

"Polo-like Kinase 4 enhances cancer cell motility and invasion".

Supervisor: Carol Swallow

#### Honourable Mention - Boris Zevin

"An evidence-based framework for the design, validation and implementation of a simulation based surgical training curriculum".

Supervisor: Teodor Grantcharov

In 2012 the Division commissioned a review of its research enterprise. **Dr. Geoffrey Porter** of Dalhousie University submitted an excellent assessment of the Division. Dr. Porter was laudatory of the record of achievement while bringing focus to the specific challenges and opportunities we need to focus on and develop deliberate steps to address. These are especially in the area of mid-level faculty support and the opportunities around integration and innovation. These aspects are also addressed in the Department's White paper and set out as focal points in the new Departmental Strategic Plan.

#### **QUALITY AND BEST PRACTICES**

General Surgery continued to lead in the creation of evidence-based guidelines and the implementation of the guidelines throughout the city through the BPiGS initiative. Led by Robin McLeod, an enlarging and increasingly varied inter-professional BPiGS team continues to bring focus to core areas of clinical importance including surgical site infection, mechanical bowel preparation, thrombo-prophylaxis, intra-abdominal infection, enhanced recovery after surgery (ERAS) and peri-operative pain management. Particularly noteworthy for 11-12 was the willingness of the University of Toronto hospitals to target money from their base budgets to support BPiGS evolution and thus sponsor the development of a single Torontowide approach to patient management. Additionally, BPiGS continued to catalyze awareness, agreement and adoption beyond Toronto as a result of outreach activities such as the BPiGS listserv and our U of T General Surgery Update Course. As 12-13 began, the Division was preparing to roll-out a multipronged approach to insure the successful KT of the ERAS initiative.

#### **FACULTY DEVELOPMENT**

General Surgery was fortunate to attract 5 **new faculty members** to the Division across the city, each bringing an array of clinical and academic strengths to our city-wide team. Shady Ashamalla (Sunnybrook; minimally invasive surgical oncology and curriculum development in simulation), Sandra de Montbrun (St. Michael's; colorectal surgery and surgical education research), Karen Devon (Women's College; endocrine surgery and ethics), Fayez Quereshy (UHN; minimally invasive surgical oncology and healthcare economics) and Jensen Tan (Humber River Regional Hospital; minimally invasive surgical oncology and surgical education) all will serve to continue to renew and invigorate our Division.

Promotion, the ultimate measure of academic development was awarded this year to:

Todd Penner to Assistant Professor

Carol Anne Moulton, Homer Tien and Natalie Coburn to Associate Professor

Helen Macrae and Sandro Rizoli to Professor

#### INTEGRATION AND OUTREACH

William Osler said that "the chief weakness of the profession (of medicine) lies in its tendency to break into cliques and coteries, the interests of which take precedence over other of wider and more public character. From this a baneful individualism is likely to arise, with every man for himself." The Division of General Surgery seeks to avoid this unfortunate tendency. Toronto benefits from a culture of striving to look for opportunities to integrate within the city and to provide impact beyond Toronto, in the Ontario health system and the world. 2011-12 was notable for the continued momentum of the U of T Trauma Program, a collaborative between St Michael's Hospital, Sick Kids and Sunnybrook Health Science Centre to integrate trauma related activities in the areas of education, quality, and research. The UofT Trauma Program features collaborative fellowship training; the newly designed Trauma & ACS fellowship will have fellows receive training from St. Michael's Hospital and Sunnybrook Health Sciences Centre. Additionally, UofT Trauma Guidelines seek to unify standards of care for trauma patients in Toronto and to have these readily available in an app. All trauma related educational activities and events are now found on the new webpage, www.trauma.utoronto.ca, or through the Divisional website at http://www.generalsurgery.utoronto.ca/ Page 17. aspx. Finally, Trauma Triage Transfer Criteria are improving the coordination efforts of EMS triage and the transfer criteria from community hospitals to a trauma centre.

The success of the Trauma Program is but one example in an increasing number of ways the individual hospitals' surgeons are linked in a systematic way.





### **Division of Neurosurgery**

Andres Lozano, Chair

he Division of Neurosurgery completed another year of strong academic performance and research productivity. Our 61 faculty and residents increased their publication output by 13 percent versus the previous year by publishing over 290 papers in top-tier journals including *Nature*, *Nature Neuroscience* and *Lancet Neurology*. Our neurosurgeons and affiliated neuroscientists captured 30 research grants with a total award value exceeding \$22.3M.

Our faculty were elected to membership in prestigious bodies in science and neurosurgery, with James Rutka becoming a Fellow of the Royal Society of Canada and the Canadian Academy of Health Sciences and Abhaya Kulkarni joining the Society for Neurological Surgeons. Michael Fehlings and Charles Tator were co-awarded the Reeve-Irvine Research Medal for Spinal Cord Injury Research, and Dr. Tator received a Lifetime Achievement Award from the American Spinal Injury Association. Our residents captured another McKenzie Prize in Clinical Neuroscience Research, the premiere neurosurgical resident award in the country and a Bisby Prize from the Canadian Institutes of Health Research.

The year concluded with the establishment of the "Michael and Amira Dan Fellowships in Neurosurgery at the University of Toronto". Over the next five years, these ten new training positions will be an invaluable addition to our academic mission. We remain extremely grateful to the Dan Family for their strong ongoing commitment to neurosurgical education and excellence in Toronto.

#### **RESEARCH GRANTS**

Leo da Costa was co-investigator on a 2-year \$162,500 grant funded by Physicians Services Incorporated entitled "Catecholamines as outcome markers in traumatic brain injury study COMA in TBI study" (PI: Sandra Rizzoli).

Leo da Costa was co-investigator on a 3-year \$134,200 grant funded by the Canadian Institutes of Health Research entitled "Optical Coherence Tomography for Intraoperative Imaging During Skull Base Neurosurgical Procedures" (PI: Victor Yang).

**Sunit Das** was awarded a 2-year BRAINchild \$44,100 grant entitled "The role of the epithelial-mesenchymal transition in the maintenance of stem-cell identity in glioblastoma brain tumor stem cells".

Karen Davis was co-investigator on a new 4-year \$451,668 grant funded by the CIHR entitled "Development of a perfusion MRI technique to investigate longitudinal effects of chronic pain on brain function:. (PI: Keith St. Lawrence, Univ. of Western Ontario)

**James Drake** was awarded a 2-year \$85,000 grant from MaRS Innovation to fund work on an "Anastomosis Tool Kit".

**Michael Fehlings** received funding from the Rick Hansen Institute for the project "Access to Care and Timing Study".

Michael Fehlings was awarded a 2-year grant from the Ontario Brain Institute for the Integrated Discovery System (IDS) Project entitled "CP Integrated Neuroscience Discovery Network (IDS-11-03).

Michael Fehlings and Charles Tator received a 2012 grant from the Christopher Reeve Foundation to continue and commence new trials with the North American Clinical Trials Network for the Treatment of Spinal Cord Injury.

Clement Hamani was awarded a two-year grant from the Sao Paolo Research Foundation (FAPESP)—University of Toronto—Western University Researcher Exchange Program.

Loch Macdonald was awarded a \$25,000 Canadian Institutes of Health Research (CIHR) Planning Grants—International Research Collaborations for the project entitled "Subarachnoid Hemorrhage International Trialists (SAHIT) Repository."

Loch Macdonald and Jinglu Ai were awarded a \$25,000 grant from the Brain Aneurysm Foundation for their project "Molecular mechanisms of memory loss following subarachnoid hemorrhage".

**Tom Schweizer** won a New Investigator Award from the Heart and Stroke Foundation of Canada in the amount of \$300,000 (2011-2016).

Tom Schweizer was the recipient of an Early Researcher Award from the Ontario Ministry of Research and Innovation valued at \$140,000 (2011-2016).

Andres Lozano was awarded a three-year \$225,000 research grant from the Canadian Institutes of Health Research (CIHR) in conjunction with the ERA-NET NEURON program for a project entitled "Biomaterials scaffoldings for brain reconstruction in stroke".

Andres Lozano has been awarded a 3-year \$520,439 grant as lead investigator from the Federal Economic Development Agency for Southern Ontario (FedDev Ontario)/Ontario Brain Institute for his project entitled "Deep Brain Stimulation for Alzheimer's disease".

**Andres Lozano** was awarded a three-year \$225,000 grant from the Krembil Foundation to support clinical studies of deep brain stimulation in Alzheimer's disease.

Andres Lozano received a 1-year \$150,000 grant as lead investigator from the Klarman Family Foundation for his project entitled "Deep Brain Stimulation for the Treatment of Anorexia Nervosa: Pilot Trial".

Andres Lozano was awarded a renewal of his \$200,000 Tier 1 Canada Research Chair in Neuroscience. The CRC Secretariat awards Tier 1 Chairs for seven-year terms to outstanding researchers acknowledged by their peers as world leaders in their fields.

Andres Lozano was the lead investigator of a new PET Scan Suite, supported by a \$2.1M Ontario Innovation Trust award to Dr. Lozano, a generous donation from the Safra Foundation, and a number of contributions from patients.

Julian Spears was co-investigator on a 1-year \$99,300 grant funded by the Canadian Institutes of Health Research for a project entitled "Systematic reviews of the evidence regarding chronic cerebrospinal venous insufficiency (CCSVI) and Multiple Sclerosis" (PI: Andreas Laupacis).

Michael Taylor was awarded as lead investigator a 3-year \$9.8M grant from Genome Canada for his project entitled "Stratifying and Targeting Medulloblastoma Through Genomics".

Michael Taylor was awarded as Co-PI a \$2.8M Genome Canada / Canadian Institutes of Health Research grant for 2011-12 with Dr. Paul Sorensen (Univ. of British Columbia) for their project entitled "The Canadian Pediatric Cancer Genome Consortium: Translating next-generation sequencing technologies into improved therapies for high-risk childhood cancer".

Michael Taylor received a 5-year \$2.6M grant from the National Institutes of Health with Drs. Bill Weiss (UCSF) and Robert Weschler-Reya for their project entitled "Cellular and Genetic Basis of Anaplastic Medulloblastoma".

Michael Taylor was awarded (with Dr. Ian Scott) two 1-year BRAINchild operating grants focused on modeling medulloblastoma in zebrafish and on identifying Group D medulloblastoma oncogenes.

Michael Taylor received a 1-yr \$75,000 Accelerator Grant in Genomic Medicine from the McLaughlin Center for Molecular Medicine for studies on drug response in medulloblastoma.

Taufik Valiante was awarded as Co-PI a 5-year \$705,670 grant entitled "Transitional states of seizures: mechanisms and modulation" from the Canadian Institutes of Health Research (CIHR) (PI: Peter Carlen).

Taufik Valiante was awarded as PI a 1-YR \$60,000 Mathematics of Information Technology and Complex Systems (MITACS)-Accelerate Cluster Award entitled "Signal processing of EEG for detection and classification of clinical brain states".

Taufik Valiante was awarded as Co-PI a grant entitled "Lacosamide Anticonvulsant Actions on Epileptic Tissue" from UCB Pharma.

Gelareh Zadeh was awarded a 5-year \$762,872 Operating Grant as Co-PI from the Canadian Institutes of Health Research (CIHR) for the project entitled "Targeting Thrombospondin-1 in medulloblastoma" (PI: A Huang).

Gelareh Zadeh was awarded a 3-year \$385,251 Operating Grant as Lead PI from the Canadian Institutes of Health Research (CIHR) for the project entitled "Role of Bone Marrow Derived Progenitor Cells in Brain Tumor Neovascularization."

Gelareh Zadeh was awarded a \$60,000 grant as lead investigtaor from the Cancer Research Society for her project entitled "Aberrations in EGFR in Human GBMs: Novel Diagnostic and Biomarker Strategies".

Gelareh Zadeh was awarded a 1-year \$50,000 BRAINchild grant entitled "Examining adverse radiation effects in developing brain."

#### **RESIDENTS AND FELLOWS HONOURS/ AWARDS/POSITIONS HELD**

Ryan Alkins received the New Investigator Award at the American Institute of Ultrasound in Medicine Annual Convention for his work entitled "Blood-Brain Barrier Disruption With Focused Ultrasound Allows Brain Tumor Therapy With Targeted Immune Cells".

Ryan Alkins was awarded the Edward Christie Stevens Fellowship in Medicine and Joseph M. West Family Memorial Fund for 2011-12.

David Cadotte won the Synthes Award for Resident Research on Brain and Craniofacial Injury for his paper entitled, "Visualizing Plasticity and Altered Neuronal Signaling in the Injured Human Spinal Cord with fMRI".

David Cadotte was awarded a 2-year Postdoctoral Fellowship Grant from the Craig H. Neilsen Foundation for his project "Functional MRI evaluation of the human spinal cord".

David Cadotte was awarded the Chisholm Memorial Fellowship, Miriam Neveren Memorial Award, Edward Christie Stevens Fellowship in Medicine and Joseph M. West Family Memorial Fund for 2011-12.

Douglas J. Cook and Michael Tymianski published a study in Nature that demonstrates the neuroprotective effects of a postsynaptic density (PSD95) inhibitor in treating stroke in an experimental primate model of the disease.

Gregory Hawryluk won the Best Science Paper Award in the 2011 Region XII Committee on Trauma resident paper competition of the American College of Surgeons and was the unanimous choice of the Canadian Trauma Association to represent Canada at the 2012 American College of Surgeons Trauma Research competition.

Gregory Hawryluk won the National Neurotrauma Society's Murray Goldstein Award for his work entitled "Neural Precursor Cells Express Trophins Following Transplantation but Remyelination is the Key Mechanism by which They Augment Functional Recovery Following Rodent Spinal Cord Injury".

George Ibrahim was awarded the Bisby Prize from the Canadian Institutes of Health Research for ranking first among applicants in the CIHR Fall 2011 Health Professional Awards fellowship competition.

George Ibrahim was awarded the William S. Fenwick Research Fellowship and Joseph M. West Family Memorial Fund for 2011-12.

Nir Lipsman was awarded a CIHR Fellowship Grant in the amount of \$50,000 for the 2011-12 academic year.

**Nir Lipsman** was the recipient of the William S. Fenwick Research Fellowship, Chisholm Memorial Fellowship, Miriam Neveren Memorial Award, Edward Christie Stevens Fellowship in Medicine and Joseph M. West Family Memorial Fund for 2011-12.

**Demitre Serletis** has been named to the prestigious Forty Under 40 Class of 2012 by the Greek America Foundation in recognition of receipients' tremendous contributions to their communities and to the world around them.

**Sunjay Sharma** was awarded the Synthesis Award for Resident Research on Brain and Craniofacial Injury at the Congress for Neurological Surgeons 2011 Annual Meeting.

Adrienne Weeks was the recipient of the 2011 A.W. Harrison Resident Teaching Award. This award is given in recognition of excellence in teaching of medical students as determined by the best teaching effectiveness scores across the Department of Surgery at Sunnybrook Hospital.

Jeff Wilson was awarded the Canadian Neurological Society's 2012 K.G.McKenzie Prize in Clinical Neuroscience Research (1st Place), the most prestigious resident awards in our discipline in Canada, for his work entitled "A Clinical Prediction Model for Long-Term Functional Outcome after Traumatic Spincal Cord Injury".

**Jeff Wilson** was selected for the Synthes Spinal Cord Injury Resident Award from the American Association of Neurological Surgeons (AANS) for his work entitled "A Prediction Model for Functional Outcome after Traumatic Spinal Cord Injury".

Jeff Wilson was the recipient of a Clinical Trial Fellowship Award from the American Association of Neurological Surgeons/Congress of Neurological Surgeons Section on Disorders of the Spine and Peripheral Nerves for a clinical trial proposal in acute spinal cord injury.

**Jeff Wilson** won the Scarlett Award from the Canadian Spine Society for his paper entitled "A Clinical Prediction Model for Long Term Functional Outcome after Traumatic Spinal Cord Injury Based on Acute Clinical and Imaging Factors".

**Jeff Wilson** was the recipient of the Chisholm Memorial Fellowship, Edward Christie Stevens Fellowship in Medicine and Joseph M. West Family Memorial Fund for 2011-2012.

### FACULTY HONOURS/AWARDS/POSITIONS HELD

**Karen Davis** was elected to a Council position of the International Association for the Study of Pain for a 6-year term.

**Karen Davis** was appointed to the Brain Canada Scientific Advisory Council for a 2-year term.

James Drake was appointed as Director of the Centre for Image Guided Innovation and Therapeutic Intervention (CIGITI), which brings together surgeons, engineers and software developers to develop innovative technologies in robotic and minimally invasive surgery, including the KidsArm, a robotic surgical system designed for operating on small children and babies.

**Michael Fehlings** is one of three recipients of this year's Golden Axon Award from the Brain Mapping Foundation, given in recognition of individuals who have demonstrated world-class leadership in neuroscience and have reached out to their local communities.

Michael Fehlings was named the 2012 Mayfield Lecturer and the Mayfield Medalist.

**Michael Fehlings** was appointed as President of the Cervical Spine Research Society (CSRS) for the 2011-12 year.

**Michael Fehlings** accepted a 5-year appointment to the Neurosurgery Research and Education Foundation (NREF) Scientific Advisory Committee.

Michael Fehlings and Charles Tator are the corecipients of the "Reeve-Irvine Research Medal". This Medal is given annually by the Reeve-Irvine Research Center at the University of California to individuals who have made critical contributions to promoting repair of the damaged spinal cord and recovery of function.

Fred Gentili and Charles Tator at Toronto Western Hospital on their receipt of Council Awards for 2011 from the College of Physicians and Surgeons of Ontario, given in recognition of outstanding Ontario physicians who have demonstrated excellence and come closest to meeting society's vision of an "ideal physician".

Mojgan Hodaie has been awarded the 2012 Bernard Langer Surgeon-Scientist Award at the 38th Gallie Day, presented to an outstanding graduate of the Surgeon Scientist Program in the Department of Surgery who shows the greatest promise for a career in academic surgery.

Abhaya Kulkarni was elected to membership in the Society for Neurological Surgeons. He joins Mark Bernstein, Michael Fehlings, Andres Lozano, Loch Macdonald, James Rutka and Michael Schwartz as our Division's newest member of this prestigious society.

Andres Lozano was selected as the recipient of the 2012 Herbert Olivecrona Award from the Karolinska Institute. The Award and Medal, named in honor of the father of modern neurosurgery in Sweden, is presented each year to a neurosurgeon for contributions to brain or spinal cord surgery and/or research.

Andres Lozano was the recipient of a 2012 Pioneer in Medicine Award from the Society for Brain Mapping and Therapeutics, given in recognition of individuals who have significantly contributed to the scientific advancement in the fields of medicine and image guided therapy through a multidisciplinary approach.

**Andres Lozano** has been made a Honourary Fellow of the Melbourne Bionics Institute.

Andres Lozano was cross-appointed as a Professor of Neurology in the Department of Medicine at the University of Toronto

**Loch Macdonald** was the recipient of a Reviewer Excellence Award from the journal Neurosurgery.

James Rutka, Chairman of the Department of Surgery, was inducted as a Fellow of the Royal Society of Canada. To the best of our knowledge, Dr. Rutka is the second inductee from our Division and from the Department of Surgery at the University of Toronto who has been recognized with this honour.

**James Rutka** was elected to the Canadian Academy of Health Sciences, in recognition of his demonstrated leadership, creativity, distinctive competencies and a commitment to advance academic health science.

**Charles Tator** was the recipient of the American Spinal Injury Association (ASIA) Lifetime Achievement Award, for his contributions to the world of spinal cord injury care

Charles Tator had a lecture named in his honor by the American Association of Neurological Surgeons/Congress of Neurological Surgeons (AANS/CNS) Section on Neurotrauma and Critical Carel. This is a well-deserved recognition of Dr. Tator's tremendous accomplishments and contributions in the field.

**Charles Tator** received the USA Hockey Excellence in Safety Award for his work in preventing brain and spinal cord injuries in hockey.

Michael Taylor was awarded the George-Armstrong Peters Prize from the Department of Surgery. The Prize is given in recognition of a young investigator who has shown outstanding productivity during the initial period as an independent investigator as evidenced by research publications in peer reviewed journals, grants held, and students trained.

**Gelareh Zadeh** on her receipt of the 2012 Lois H Ross Resident Advocate award from PAIRO, given to one individual each year who consistently advocates on behalf of residents and resident issues, within their role as either an administrator, teacher or clinician.

**Gelareh Zadeh** was appointed as the Chair of the Medical Advisory Committee for Acoustic Neuroma Association of Canada.

**Gelareh Zadeh** was given a full time faculty appointment at Spatiotemporal Targetting and Amplification of Radiation Response (STARR) Facility at University Health Network.

#### **VISITING PROFESSORS**

#### **E. HARRY BOTTERELL PROFESSORSHIP**

We were pleased to receive Professor Jacques Morcos, University of Miami, as the 29th Botterell Visiting Professor on Nov. 10-11, 2011.

This year's Botterell program was modified to include a special tribute on November 11 to Dr. Ab Guha, a neurosurgeon-scientist at Toronto Western Hospital and valued colleague, who passed away earlier that week. In attendance were Dr. Guha's wife Soma and his children Deep and Tia, along with a strong showing from the University of Toronto and University Health Network communities who filled the Main Auditiorum at the Western. The session was led by Dr. Fred Gentili and followed by moving tributes from Dr. Alan Hudson, past Chair of our Division, and from Dr. Gelareh Zadeh, who completed her PhD degree under Dr. Guha's supervision.

#### **HARLAND-SMITH LECTURESHIP**

On Mar. 29, 2012, the Divisions of Anatomy and Neurosurgery welcomed Dr. K. Daniel Riew, the Mildred B. Simon Distinguished Professor of Orthopedic Surgery and Professor of Neurological Surgery at Washington University, to Toronto Western Hospital as the 2012 Harland-Smith Lecturer.



16 9th Annual Neurosurgery Charity Softball Tournament, June 9, 2012, Central Park, N.Y.

#### **BRUCE HENDRICK PROFESSORSHIP**

On Sep. 23, 2011, we welcomed Dr. Richard Ellenbogen, Professor and Theodore S. Roberts Endowed Chair of Pediatric Neurological Surgery at the University of Washington, to the Hospital for Sick Children as our 26th E. Bruce Hendrick Visiting Professor in Pediatric Neurosurgery.

#### **WILLIAM S. KEITH PROFESSORSHIP**

On June 11-12, we welcomed Dr. Christopher Shaffrey, Harrison Distinguished Teaching Professor of Neurological Surgery at the University of Virginia, as our 37th William S. Keith Visiting Professor at Toronto Western Hospital. Dr. Shaffrey delivered three excellent surgical lectures including the Royal College of Physicians and Surgeons of Canada Lecture.

#### CITY-WIDE ROUNDS, ST. MICHAEL'S HOSPITAL

Dr. Peter Leroux, Associate Professor of Neurosurgery, University of Pennsylvania, was our City-Wide Rounds speaker hosted by St. Michael's Hospital at the Li Ka Shing Knowledge Institute on Apr. 20, 2012.

#### CITY-WIDE ROUNDS, SUNNYBROOK HOSPITAL

Dr. Ali Krisht, Director of the Arkansas Neuroscience Institute, was welcomed as Sunnybrook Hospital's City-Wide Rounds speaker on May 18, 2012.

#### **CITY-WIDE ROUNDS, TORONTO WESTERN HOSPITAL**

Dr. Christopher Ogilvy, the Robert G. and A. Jean Ojemann Professor of Neurosurgery at Harvard Medical School, was our Visiting Professor for City-Wide Rounds held at Toronto Western Hospital on Mar. 30, 2012.

#### **DIVISION FIRSTS**

Our Divison's 1st Annual General Meeting was held on Sep. 16, 2011 at the Toronto Western Hospital with approximately 40 faculty, resident and fellows in attendance. The Chairman's state-of-the-union address provided an assessment of faculty demographics, OR statistics, grant funding and other measures of excellence. This was followed by updates from the Directors of the residency program, fellowship programand undergraduate teaching program. Division Heads from each hospital provided highlights of the past year's achievements and plans for hiring and future growth.

We launched a new monthly public series, Faculty Focus, on our Division website. This series is meant to provide a more recent and in-depth feature on our faculty members, and the features will be compiled into a booklet and used to promote our Division for fundraising purposes.

In efforts to further strengthen our fellowship program, we appointed lead fellowship coordinators at each hospital: Drs. Todd Mainprize (Sunnybrook Hospital), Loch Macdonald (St. Michael's Hospital), James Drake (Hospital for Sick Children) and Michael Tymianski (Toronto Western Hospital). Dr. Mainprize continues to serve as our Division's Fellowship Director at the citywide level.

In alignment with the Department of Surgery's Strategic Plan for 2012-17, Surgical Leaders of Undergraduate Education were appointed at each hospital: Todd Mainprize (Sunnybrook Hospital), Julian Spears (St.

Michael's Hospital), Abhaya Kulkarni (Hospital for Sick Children) and Eric Massicotte (Toronto Western Hospital). Dr. Massicotte continued to serve as our Division's Director of Undergraduate Teaching.

The Stereotactic and Functional Fellowship at the Toronto Western Hospital was accredited for a five year period by the Committee on Accredication of Subspecialty Training (CAST) of the Society of Neurological Surgeons. This is the first CAST-accredited stereotactic and functional fellowship in Canada, and the third in North America.

We are very pleased to have established two new city-wide fellowships in our Division effective Jul. 1, 2012, enabled by the generous support of Torontoarea neurosurgeon Dr. Michael Dan. Each year, two "Michael and Amira Dan Fellowships in Neurosurgery at the University of Toronto" will be available, with applicants from Bosnia particularly encouraged. Over the next five years, these ten new training positions will be an invaluable addition to our Division's academic mission, and we are extremely grateful to Michael and the Dan Family for their strong ongoing commitment to neurosurgical education and excellence in Toronto.

#### **LEADERSHIP CHANGES/PROGRESSIONS**

Michael Tymianski was selected as and accepted the position as Head of the Division of Neurosurgery at Toronto Western Hospital, effective June 1. Please join me in congratulating and conveying our best wishes to Michael on this prestigious appointment and in supporting him as he leads our Division at Toronto Western into our next stage of excellence at national and international levels.

#### **ROYAL COLLEGE FELLOWSHIPS**

The following PGY6 residents successfully passed their 2012 FRCSC fellowship examinations: Douglas Cook, Suneil Kalia, Demitre Serletis and Victor Yang.

I would ask our Division to pause and reflect on the challenges we have faced and our accomplishments made in the past academic year. We were deeply saddened and drawn closer together by the loss of dear colleagues and friends Ab Guha, Patricia Fleming and Thomas Morley. We have been enriched by our growing base of local and international fellows. And we continue to be inspired by the dedication and achievements of each of our outstanding Faculty and residents, who make us proud to be part of the world-leading group that is Toronto Neurosurgery. I thank each of our faculty, residents and fellows for their contributions to the life of our Division.



## Division of Orthopaedic Surgery

Ben Alman, A.J., Latner Professor/Chair

e worked to implement our strategic plan entitled "Innovation and Evolution: Inventing the future of Toronto Orthopaedics." this past year, Three work groups: Education lead by Peter Ferguson, Research lead by Albert Yee and Clinical headed by Nizar Mahomed were formed. Progress reports were provided by all three group leaders at the Annual Division Wide Meeting in April. We are making steady progress navigating the future of orthopaedics in Toronto in all three of these

We completed the third year of our competency-based curriculum. This pilot program, approved by the Royal College of Physicians and Surgeons of Canada, and funded by the Ontario Ministry of Health and Long Term Care is the only entirely competency-based residency training program that we are aware of in the world. I want to take this opportunity to thank all of our faculty members, who worked on this initiative. Markku Nousiainen our associate program director, Peter Ferguson, our residency program director, and Connie Johnson, the administrative coordinator for the program have done a phenomenal job in running the day to day aspects. By all measures this program has been a great success, with residents in the program achieving levels of competency in a single year that would have taken several in the traditional stream. Some of the components have been so overwhelmingly successful, such as the initial module that we incorporated this into our training program for all residents. Our third cohort of trainees entered the program this year, and we are looking forward to reporting our results of this very innovative educational program. There is worldwide interest in this program, and I am delighted that we now have several peer-reviewed publications on the outcome of this novel training approach.

Peter Ferguson continues to do a stellar job as our residency program director. Under his guidance we had a very successful external Royal College Review of both (Regular and CBC) streams of the program with no significant weaknesses identified. One of our future initiatives will be to take the necessary steps to enable our residency training program to switch to a competency-based curriculum as our multi-site clinically based programs continue to mature.

As part of our initiative to develop a broader competency based program, we are starting to think about organizing some aspects of education, research, and clinical care along specialties rather than sites. Albert Yee (Sunnybrook) along with Michael Fehlings (Neurosurgery - TWH) as co-director of the U of T Spine Program, are doing a fabulous job working to integrate spine care, education and research across orthopaedics but also between orthopaedics, neurosurgery and other disciplines treating the spine. Tim Daniels (SMH) as the head of our foot and ankle program has developed a Toronto wide foot and ankle education program (including a city wide fellowship program), and is helping to coordinate care between foot and ankle specialists in the GTA, and to encourage new research in this field. Darrell Ogilvie Harris (UHN and Women's) continues to do a stellar job as interim head of our sports program. This program united clinicians from several of our hospitals and developed shared clinical resources for outpatient care at Women's College Hospital towards the development of an innovative comprehensive sports clinical, education, and research program. The program has developed a fully integrated education module for residents and fellows.

Our academic footprint is a measure of how we impact orthopaedics internationally. It is a measure of the impact of our publications, the number of our trainees who have develop successful academic careers outside of Toronto, and how our work improves the outcome for the patients we treat. We have one of the world's largest academic footprints, having ranked third in the world in peer reviewed publications last year, and this accomplishment is in no small part due to our strong focus of research.

The Toronto Musculoskeletal Centre (a university wide extra-departmental unit) was initiated last year. While the center crosses all institutions and departments across the broad University of Toronto and its affiliated hospitals community, it has two nodes at Sunnybrook Hospital and Mount Sinai Hospital. The centre focuses on developing initiatives to help translating research from the bench to the bedside to the backyard. Several trainees working with members of our division received salary support for their interdisciplinary translational research. The centre is developing a new collaborative graduate education program, and helping with the recruitment of new MSK researchers to Toronto. Its ultimate goal is to develop new and improved methods of treating patients with orthopaedic and other musculoskeletal conditions. Our division members will be able to use the centre infrastructure to develop multi centre research and to help develop new interdisciplinary work.

Sevan Hopyan and Cari Whyne, as co-chairs of our research committee continue to do a fabulous job overseeing and mentoring the residents who entered their integrated research and clinical year. Their

participation in this novel combined clinical and research training program has facilitated the ability of our trainees to participate in high level research, resulting in an overall increase in our research productivity.

The past several years have seen the development of new technologies and research paradigms that have improved the quality and clinical applicability of our research work. These developments are associated with growth in the size of the biomedical research community and the expense of undertaking high quality research studies. Indeed there has been tremendous growth in the Toronto research community over the past decade. Unfortunately, national research funding has not kept pace with the increased costs associated with undertaking this high quality research. Despite these challenges, we continue to maintain research fining at a high level, with our funding this year totaling more than \$6 million dollars

We welcomed a new recruit this academic year, Paul Kuzyk. Paul has a clinical practice focused on lower limb reconstruction and an academic focus on research. We all welcome Paul to our faculty.

Congratulations to our faculty member who was successful at academic promotion this year at the university. Cari Whyne was promoted to full professor. Also thanks to our division member, Robin Richards, who chairs the departmental promotions committee.

Peter Ferguson received Tovee Postgraduate Prize for his educational achievements and Cari Whyne and Albert Yee awarded Charles Tator Award for their training of surgeon scientists at Gallie Day this year.

Our Graduation Day Visiting Professor was James Kasser, the Catharine Ormandy Professor of Orthopaedic Surgery at Harvard Medical School, and Chairman of the Department of Orthopaedic Surgery at Children's Hospital, Boston and Surgeon-in-Chief at Children's Hospital Boston. He gave a fabulous and very insightful "Early DDH, Etiology, Diagnosis and Treatment" talk as his Salter lecture. Graduating residents presented their research work during the main Graduation Day activities.

The Lawson award for best academic resident, as adjudicated by a committee, went to Erion Qamirani, and the Meisami award for most compassionate resident, as selected by the faculty, went to Maryse Bouchard. The R.I. Harris award for the best presentation at the Graduation Day went to Tom Trajkovski and the Bob Jackson (for the best sports medicine talk); Canadian Back Institute (for the best spine talk) went to David Wasserstein and Edward Lansang respectively. The James Waddell award for the best PGY 4 resident was awarded to Mark Camp. David Backstein received the Divisional Award for Best Teacher as selected by the residents.

Peter Newman (San Diego), Robert Marx (New York), Bas Masri (Vancouver), Bruno Fuchs (Switzerland), Peter Bonutti (Effingham), Marc Philippon (VAIL) and William Levine (New York) all visited Toronto this year and gave University wide grand rounds. We had the inaugural Stefansky lecture for teaching better communication to orthopaedists. Gary Friedlaender (New Haven) was our inaugural lecturer. He gave an insightful talk on the importance of good communication in achieving excellent patient outcomes.

There were a large number of awards that our faculty received this past year. There are too many to mention here, and they are listed elsewhere in this annual report. Our fifth year resident Marilyn Heng received R. Wilson Award as an outstanding teacher as rated by undergraduate students.

The University of Toronto's Division of Orthopaedic Surgery is continuing in its long history of excellence in clinical care, teaching, and research. Our faculty's renewed focus on innovation and integration has resulted in new education, research, and clinical advances. I am proud of how well our division members are working together to inventing the future of Toronto Orthopaedics.



17 The Division of Orthopaedics Faculty



# Division of Plastic and Reconstructive Surgery

Christopher R. Forrest, MD, MSc, FRCSC, FACS Interim Chair

t has been an interesting and highly productive year for the Division of Plastic and Reconstructive Surgery with a change in leadership, hosting the Society Annual meeting, continued expansion and development making a major footprint in the research arena with several key grants and publications and a host of faculty and house-staff awards. With our faculty and housestaff, we are the largest academic Division of Plastic and Reconstructive Surgery in North America and have a powerful combination of community and academic partnerships with access to the entire spectrum of surgical experience for our trainees and worldrenowned staff in the arenas of pediatric surgery, cleft, craniofacial, burns, microsurgery, facial reanimation, upper extremity, breast, aesthetic and oncologic surgery providing state of the art in patient care. Our faculty, alumni and trainees continue to make significant contributions to and lead in the areas of plastic surgery research, education and clinical practice.

#### **RECRUITMENT:**

Manuel Dibildox was recruited as a Lecturer to the Ross Tilley Burn Centre on July 1, 2011. Dr. Dibildox is now the fourth burn surgeon at the RTBC in the Sunnybrook Health Sciences Centre.

#### **PROMOTIONS**

Jeff Fialkov was promoted to Associate Professor

#### **FACULTY AND RESIDENT GRANTS**

**Stefan Hofer**, Thomas Waddell and Siba Haykal: "Determining the Immunogenicity of Decellularized Tracheal Allografts". Physicians Services Incorporated Foundation for \$155,000 from 2011-2013.

Nancy Baxter, **Toni Zhong**, **Stefan Hofer** and **Melinda Musgrave:** "Utilization and Timing of Breast Reconstruction in the Treatment of Breast Cancer in Ontario: A Population-Based Study". Canadian Breast Cancer Foundation Research Project Grant Program for \$257,474 from 2011-2014.

Marc Jeschke: "Characterization of Hepatic Dysfunction Post-Burn". CFI funded grant for \$1 million.

Karen Davis, **Dimitri Anastakis**, and Jeff Katz: "Preexisting Patient Factors Associated with Sensorimotor Recovery, Chronic Pain, and Brain Plasticity Following Surgical Repair of Peripheral Nerve Injuries". Workers Safety and Insurance Board, Research Advisory Counsel for \$348,273 from 2011 – 2014. Edward Liu and **Greg Borschel** BDNF and GDNF for treatment of nerve injury. CIHR Health Professional Student Research Award. Collaborators: (\$4,251 CAD, 2012-2013).

Greg Borschel, Wood, Matthew; Gordon, Tessa; Shoichet, Molly GDNF and BDNF Microspheres for Treatment of Nerve Injury. Ontario Ministry of Innovation, Post Doctoral Fellowship (PDF) Program.. (\$100,000 CAD, 2011-2013)

Greg Borschel, Tessa Gordon. Infrastructure Operating Funds (IOF); Nerve Research Centre at the Hospital for Sick Children in Toronto. Canada Foundation for Innovation (New Opportunities Fund), Infrastructure Operating Funds (IOF), 26497. (\$47,574 CAD, 2011-2012)

**Greg Borschel**, **Tessa Gordon**. Nerve Research Centre at the Hospital for Sick Children in Toronto. Canada Foundation for Innovation, Leaders Opportunity Fund, 26497. (\$549,322 CAD, 2011-2012).

**Greg Borschel**, Matthew D. Wood, PhD (trainee PI). BDNF and GDNF for treatment of nerve injury. Plastic Surgery Foundation. (\$10,000 USD, 2011-2012)

**Greg Borschel**, **Tessa Gordon**. Side-to-side nerve grafting to enhance nerve regeneration. Plastic Surgery Foundation, National Endowment for Plastic Surgery, 198879. (\$50,000 USD, 2011-2012)

Behavioural study of facial nerve injury and regeneration. The Hospital for Sick Children Research Institute, Trainee Startup Fund (TSUF). **Greg Borschel**. Collaborators: Kemp, Stephen. (\$3,000 CAD, 2011-2012)

**Greg Borschel**, Matthew D. Wood, PhD GDNF microspheres for treatment of nerve injury in a rat model. RestraComp, Postdoctoral fellowship funding program. (\$36,750 CAD, 2011-2012).

**Greg Borschel**, Steven W. Kemp, PhD. Evaluation of P7C3, a novel neuroprotective compund, for peripheral nerve regeneration. RestraComp, Postdoctoral fellowship funding program. (\$36,750 CAD, 2011-2012).

**Greg Borschel**, **Tessa Gordon** Improving functional recovery after peripheral nerve injury. CIHR, Operating Grant.. (\$290,996 CAD, 2011-2012).

Greg Borschel, Manfred Frey, Tessa Gordon. Application of side-to-side nerve grafting to support regeneration in facial paralysis. Österreichisch Fonds zur Förderung der wissenschaftlichen Forschung [The Austrian Science Fund (FWF)]. (\$45,000 EUR, 2011-2012).

Greg Borschel, Tessa Gordon Side to side nerve grafting to enhance regeneration in denervated distal nerve stumps. Comprehensive Research Experience for Medical Students (CREMS), CREMS 2011-13, (\$5,500 CAD, 2011-2012)

**Greg Borschel**, **Tessa Gordon** Side to side nerve grafting to enhance regeneration in denervated distal nerve stumps. Comprehensive Research Experience for Medical Students (CREMS), CREMS 2011-13, n/a. (\$5,500 CAD, 2011-2013).

**Greg Borschel**, Peter Phua, McMaster University. How do side-to-side nerve grafts promote recovery after nerve injury? CIHR, CIHR Health Professional Student Research Award. (\$4,251 CAD, Jan-Dec 2011).

**Greg Borschel**, Shelly Sakiyama-Elbert, Susan E. Mackinnon. Controlled growth factor delivery for motor nerve injury. American College of Surgeons. (\$ 80,000 USD, 2009-2011).

Morgan P, Davidge K, **Brown M**, **Semple JL**: Quality of recovery in women undergoing autogenous breast reconstruction in an ambulatory setting. PSI (\$13,500 - 2011-2012).

Palmieri, T. Cartotto R. Multicentre Transfusion Trigger Study. University of California (Davis, CA). US Army Department of Defence/American Burn Association. (\$1,000 USD per year 2011-2013).

Sowa, Mike, **Fish**, **Joel**. An Optical Imaging Device for a Rapid Assessment of Tissue Viability and Wound Healing. CRTI, Research and Technology Initiative. (Total Amount: \$2,750,000 CAD. 2011 Jul - 2012 Jun: \$1,480,769 CAD (prorated). 2011 Jan - 2012 Jan.

Sowa, Mike, **Fish**, **Joel**. An Optical Imaging Device for a Rapid Assessment of Tissue Viability and Wound Healing. Centre for Security Science CRTI, Centre for Security Science CRTI. (Total Amount: \$180,000 CAD., 2011 Jul - 2012 Jun: \$45,000 CAD (prorated).

Wong K, Klasen A. Forrest CR, Wong K. CLEFT-Q: Development of a patient-reported outcome (PRO) measure for cleft lip and/or palate (CLP). Canadian Society of Plastic Surgeons Outcome Research Grant. PI\$10,000 CAD. Jan 2012.

Hofer SOP, Zhong T, Metcalfe K. Development of a decision support tool in post-mastectomy breast reconstruction surgery. Canadian Institute of Health Research (CIHR). \$184,540 CAD. 2012 – 2014

Hofer SOP, Waddell T, Haykal S. Defining the Structural Integrity of Decellularized Tracheal Allografts. Physicians Services Incorporated Foundation (The) (PSI). PI: Hofer SOP, Waddell T, Haykal S. \$150,000 CAD. 2011 Jul - 2012 Jun.

Hofer SOP, Waddell T, Haykal S. Determining the Immunogenicity of Decellularized Tracheal Allograft. Physicians Services Incorporated Foundation (The) (PSI). Resident Research Grant. \$9,990 CAD. 2011 Jul-2012 Jun.

Pang C, Hofer SOP, Forrest C, Zhong T. Hypoxic postconditioning of human skeletal muscle against reoxygenation injury: efficacy, mechanism and therapeutic potentials. Canadian Institutes of Health Research (CIHR). \$326,763 CAD. 2009 Jul - 2012 Jun.

**Jeschke M** Glucose control in severely burned patients: mechanism and therapeutic potential. Physicians Services Incorporated Foundation (The) (PSI). Health Research Grant Program. (\$86,000 per year, 2011-2013).



 $18 \ \ \textbf{Plastic and Reconstructive Surgery Hockey Team}$ 

Jeschke M Characterization of burn induced hepatic dysfunction. National Institutes of Health (NIH) (USA). NIH RO1 GM087285-01A2. (\$228,000 per year 2010-2015).

Jeschke M. Leader's Opportunity Fund application. Canada Foundation for Innovation (CFI). Project # 25407. 1,100,000 CAD. (\$1,000,000 2010-2015).

Davidge K, Semple JL, Quality of Recovery in Women Undergoing Autogenous Breast Reconstruction in an Ambulatory Setting. Women's College Hospital. (\$13,500 2011.)

Johnston M, Semple JL, Impact of Radiation Therapy on the Lymphatic Circulatory System: Relevance to Breast Cancer Related Lymphedema. Canadian Breast Cancer Foundation - Ontario Region Chapter. (\$430,631 2011 - 2014.)

Semple J, Brown M, Morgan P, Davidge K, Implementation of 23 hr length of stay for breast reconstruction surgery: Quality of recovery evaluation following discharge. WCH AFP Innovation Grant (\$29,841 - 2011-2012).

Phillips J, Saber N and Forrest C. - The Use of Prefabricated Templates in Cranial Vault Remodeling. Hospital for Sick Children Peri-operative Services Innovation Grant (\$10,000 - 2012)

Zhong T, Baxter N, Hofer S, Semple J, Brown M, Beber B, Macadam S, Hoch J, Lennox P, Devins J: The Use of Acellular Dermal Matrix in One-Stage Implant Breast Reconstruction: A Multicenter, Randomized Controlled Trial. Canadian Breast Cancer Foundation (CBCF). (\$368,449 2012 - 2015).

Sheina Macadam, Lennox, P, Van Laeken, N, Zhong, T, Lipa, J, Snell, L, Vidal, C, Lemaine, Pusic, A, Hazen: Quality of life and patient reported outcomes of reconstruction in breast cancer survivors. Canadian Breast Cancer Foundation - British Columbia/ Yukon Chapter. (\$10,000/year 2010 - 2011).

Toni Zhong, Nancy Baxter, David Urbach, Rinku Sutradhar, Stefan OP Hofer, Melinda Musgrave, Kristen Davidge, Jennica Platt: Utilization of Breast Reconstruction in the Treatment of Breast Cancer in Ontario and Identification of Barriers to Access: A Population-Based Study. Canadian Breast Cancer Foundation - Ontario Region. (\$85,825/year 2011 - 2014).

Toni Zhong, Srinivas, Coimbatore; McCluskey, Stuart; Hofer, Stefan OP: The use of transversus abdominis plane (TAP) block in autologous breast reconstruction donor site: A randomized, double-blind, placebocontrolled trial. Educational Foundation - Canadian Society of Plastic Surgeons - Outcome/Clinical Study Research Grant (\$10,000/year 2011 - 2012).

Toni Zhong, Srinivas, Coimbatore; McCluskey, Stuart; Hofer, Stefan OP: The use of transversus abdominis plane (TAP) block in autologous breast reconstruction donor site: A randomized, double-blind, placebocontrolled trial. Plastic Surgery Educational Foundation - American Society for Reconstructive Microsurgery - Combined Pilot Research Grant. (\$10,000/year 2011 -2012).

Toni Zhong, Nancy Baxter: The Use of Acellular Dermal Matrix in One-Stage Implant Breast Reconstruction: A Multicenter, Randomized Controlled Trial. Conquer Cancer Foundation and the American Society of Clinical Oncology - Career Development Award. (\$66,666/year 2012 - 2015).

#### **RESIDENTS HONOURS/AWARDS/ POSITIONS HELD**

Siba Haykal: Enrolled in the PhD Program at the Institute of Medical Science. CIHR Training Program in Regenerative Medicine Scholarship.

Siba Haykal: 66th Annual Meeting of the Canadian Society of Plastic Surgeons Best Basic Science Paper Award 2011-2012 for "Determining the In Vitro Immune Response Towards Decellularized Porcine Tracheal Allografts Used in Airway Transplantation".

Ron Somogyi: Best Clinical Paper Award 2011-2012 for "Complications and Reoperations in Primary Breast Augmentation and Augmentation Mastopexy: A Single Surgeon's Review of 1700 Cases".

Kristen Davidge: Mentor Canada, Johnson and Johnson Medical Companies Prize for Best Clinical Paper Award 2011-2012 for "Processes of Care in Autogenous Breast Reconstruction with Pedicled TRAM Flaps: Expediting Postoperative Discharge in an Ambulatory Setting".

Kristen Davidge: Shafie S. Fazel Outstanding Resident Surgeon and Investigator Award for 2012.

Kristen Davidge: 2012 Ross Tilley Scholarship

Jennica Platt: Received CIHR Master's Award: Frederick Banting and Charles Best Canada Graduate Scholarship (\$17,500) September 2012-2013.

Jennica Platt: Received GlaxoSmithKline-Canadian Breast Cancer Foundation Ontario Region Physician Fellowship (\$71,500) July 2012-2013.

Jennica Platt: Received the Mentor Medical Systems Canada Graduate Scholarship in Plastic and Reconstructive Surgery (1 year tuition, \$8, 405) for 2011-

Jennica Platt: Received the Research Recognition Award - Annual Division of Plastic and Reconstructive Surgery Research Day

Jennica Platt: Received the Ontario Ministry of Health - Clinical Investigator Program Salary Support Grant (\$61,990 + benefits) 2011-2012.

Mike Hendry: Accepted into the 2012 - Clinical Investigator Program - accredited postgraduate medical education program of the Royal College of Physicians and Surgeons of Canada. Awarded full salary support and benefits for first year of study.

Mike Hendry: Received the 2012 Restracomp Research Training Competition Studentship, \$ 40,000 per annum.

This studentship is supported, fully or in part, by the Ontario Student Opportunity Trust Fund - Hospital for Sick Children Foundation Student Scholarship Program.

Mike Hendry: Received the 2012 - John Edward De Toro Scholarship, \$550

Heather Baltzer: Received the ASSH/AFSH Annual Meeting Scholarship (\$1500) 2011-2012 Received the Canadian Society of Plastic Surgeons Epidemiology and Biostatistics Award (\$500) Received the Canadian Journal of Plastic Surgery Award for Best Research Presentation (\$2500)

#### Fellows Honours/Awards/Positions Held

**Adel Fattah:** (Fellow, The Hospital for Sick Children): Received the 2012 Lindsay Research Award presented at the 9th Annual Lindsay-Thomson Pediatric Plastic Surgery Symposium. "Creation of a 3D digital model of the gracilis muscle: Application to free functioning muscle transfer." Adel received a cheque in the amount of \$1000 and a plaque.

Amir Mrad: Received an Executive MBA at the Rotman School of Management, University of Toronto. June 2012. Full member of CSPS and ASPS.

Alison Snyder-Warwick (Fellow, The Hospital for Sick Children): "Functional outcomes in facial reanimation: Comparison of innervation sources" (Supervisors Drs. Zuker and Borschel)

#### **FACULTY HONOURS/AWARDS/POSITIONS HELD**

Cory Goldberg: Arnis Freiberg Faculty Teaching Excellence Award 2012.

Oleh Antonyshyn: William K. Lindsay Faculty Research Mentor Award 2012.

Dimitri Anastakis: appointment as Vice-Dean, Office of Continuing Education & Professional Development Faculty of Medicine, University of Toronto 2012 present.

Executive Director, SIM-one, Ontario Simulation Network, May 2010-present Local Host, Canadian Society of Plastic Surgeons Meeting in Toronto, Ontario June 5-9, 2012. Surgeons as Educators Course Chair for the American College of Surgeons, Division of Education November 2010 - Present.

Association for Surgical Education Executive Committee, President Elect, Mar 22, 2011 - Present

#### **VISITING PROFESSORS**

#### 2012 Hoyle Campbell Visiting Professor

This year's Hoyle Campbell Visiting Professor was Dr. Michael Bentz. Michael L. Bentz, MD is Professor of Surgery, Pediatrics and Neurosurgery at the University of Wisconsin School of Medicine and Public Health. He serves as Chairman of the Division of Plastic and Reconstructive Surgery, and Vice Chairman of Clinical Affairs for the Department of Surgery. Visiting Professor events were held on Thursday February 9th for the Visiting Professor and Senior Residents only. Friday, February 10th, 2012 was dedicated to the Annual Division of Plastic and Reconstructive Surgery Research Day for all faculty, residents, fellows and alumni at the Art Gallery of Ontario and was sponsored by our various corporate partners.

#### 10th Annual R.T. Manktelow Hand and Microsurgery Lectureship

This year's Ralph T. Manktelow Hand Surgery Day was held on October 21, 2011. This year's Visiting Professor was Dr. David Ring, Director of Research, Hand & Upper Extremity Service, Associate Professor, Harvard Medical School, Boston. Dr. Ring's keynote address was entitled, "A New Look at Common Hand Problems".

#### 8th Annual Lindsay-Thomson Symposium in Paediatric Plastic Surgery

The 8th Annual Lindsay-Thomson Symposium in Paediatric Plastic Surgery was held on June 12, 2012. Professor Yu Ray Chen from Tapei, Taiwan was the 2012 Vale Inco Lecturer and spoke on "32 years after my craniofacial fellowship in SickKids" which was a reflection on his career achievements after completing his fellowship in craniofacial surgery under Dr. Ian Munro in 1979.

#### **Continuing Medical Education**

The 13th Annual Toronto Breast Symposium was held on April 19th, 2012 at the Sutton Place Hotel and welcomed Visiting Professors: Dr Rod Rohrich, Dallas, Texas and Dr. Simeon Wall Jr in private practice in Shreveport, Louisiana. This symposium was chaired by Dr. Mitch Brown and co-chaired by Dr. Brett Beber and Dr. Kyle Wanzel. This was followed by the 41st Annual Aesthetic Plastic Surgery Symposium held from April 20th - 21st, 2012. Visiting Professors included: Dr Rod Rohrich, Dallas, Texas and Dr. Simeon Wall Jr in private practice in Shreveport, Louisiana. Both symposia were well attended and the quality of the lectures was outstanding. This symposium was co-chaired by Dr. Frank Lista and Dr. Tom Bell.

3nd Annual Division of Plastic and Reconstructive Surgery Research Day was held on February 10th, 2012 at the Art Gallery of Ontario. This mini-symposium was well attended with 80 attendees which included faculty, residents, fellows and alumni. For the 2nd time this year, the annual Research Day was CEPD accredited. What was most notable this year as well at the Research Day was that an evaluative process from the supervisors of the projects as well as feedback from the visiting professor and two judges was compiled and 100% of the resident presenters received recognition awards for their high caliber of research.

AO North American Hand & Wrist Course. An AO Hand and Wrist Fracture Management Workshop was held in Toronto on May 5th, 2012 was jointly organized by Dr. Paul Binhammer and Synthes.

#### **Plastic Surgery School**

Plastic Surgery School was implemented in September 2010 as the Division's first Academic Half Day for the Senior Residents. Academic sessions are considered mandatory protected time for the residents. Most of these sessions are designed for senior residents, however some of the sessions are designed for both senior and junior residents. Plastic Surgery school takes place on Mondays from 8:00-11:00 a.m. and includes Resident Seminars, Ethic sessions, Surgical Skills sessions, and CanMEDS seminars/workshops. Each of these sessions, as well as all academic activities have been formally evaluated, with feedback sent directly to the facilitators

to use to create change where necessary as it relates to improved teaching methods.

#### **Graduation Gala Event**

One of the highlights for the past year was the Division Graduation Gala Event. This was held at Hart House in the Great Hall on Thursday, June 21st, 2012. A faculty roast was given by the residents and a special presentation was made in honor of Dr. Dimitri Anastakis, marking his many accomplishments and achievements in his tenure as Chair for the Division of Plastic and Reconstructive Surgery, University of Toronto. We wish much continued success to Dimitri as he embarks on many new challenges in his capacity as Vice-Dean, Continuing Education and Professional Development in the Faculty of Medicine.

#### IAMGOLD & AMREF Project

The Division of Plastic and Reconstructive Surgery along with a grant obtained from IAMGOLD Corporation, began a project in East Africa to evaluate the need for reconstructive surgery in the region. The project is in direct partnership with the African Medical Research and Foundation (AMREF) based in Nairobi, Kenya. Dr. Leila Kasrai is leading the project in collaboration with Dr. Shahla Yekta, a global health researcher and cofounder of Mind the Health Gap.

#### **Division Firsts**

At the Canadian Society of Plastic Surgeons Annual Meeting Educational Symposium held in Toronto in June 2012, Drs. Ronald Zuker and Greg Borschel from the Hospital for Sick Children presented their protocol for Vascularized Composite Tissue Allotransplantation in children. This is the first pediatric protocol in Canada. Adult protocols from London and Calgary were also discussed at the symposium. A multidisciplinary

collaborative effort with partners from Toronto General Hospital (Drs. Stefan Hofer, Ralph Gilbert and Shaf Keshavjee) has been submitted to the Ministry of Health and Long Term Care.

#### **Leadership Changes/Progressions**

After a highly successful 5-year review, Dr. Dimitri Anastakis was successfully awarded the position of Vice-Dean, Office of Continuing Education & Professional Development Faculty of Medicine, University of Toronto and stepped down as the Division Chair in September 2011. Dr. Christopher Forrest, Chief, Division of Plastic & Reconstructive Surgery at the Hospital for Sick Children assumed the role of Interim Chair. A search for the position has been launched.

#### **ROYAL COLLEGE FELLOWSHIPS**

**Kristen Davidge** successfully passed her RCPSC fellowship examination.

**Taiba Al-Rasheed** successfully passed her RCPSC fellowship examination.

**Richard Backstein** successfully passed his RCPSC fellowship examination.

**Ryan Neinstein** successfully passed his RCPSC fellowship examination.

The Division of Plastic and Reconstructive Surgery at the University of Toronto remains a powerhouse of accomplishment in research, education and clinical service. Thanks to past plastic surgery leadership and faculty our division has been positioned favourably. With 44 faculty (plus 4 researchers), the Division of Plastic and Reconstructive Surgery is one of the largest academic plastic surgery centres in North America.



19 Annual Lister Prize and Peters Prize Presentation, November 4, 2011: Thomas Waddell, Michael Taylor.



20 Gallie Day Gala Dinner: Dean Whiteside.



## Division of Thoracic Surgery

Dr. Waddell, Chair

he academic year 2011-2012 was another tremendously successful year for our Division. It fills me with great pride to serve our University in leading such a committed and passionate group of faculty, trainees and associated colleagues. Exciting innovations abound in both clinical care and laboratory research and our Division continues to excel in all domains of teaching excellence, clinical innovation and fundamental investigation. Most importantly, the camaraderie and warmth of our Division continues as we all look forward to numerous occasions such as journal club, Visiting Professors, the Refresher Course and Pearson Day. These wonderful opportunities to enjoy the company of friends and colleagues ensure the bright future of our Division.

#### RECRUITMENT

The University of Toronto Division of Thoracic Surgery announced several recruits last year. This year, our partners at McMaster University recruited Dr. Colin Schieman after a fellowship at the Mayo Clinic. Dr. Schieman received his university education including undergraduate and medical school training at the University of Calgary and then completed both General and Thoracic Surgery residencies at the University of Calgary.

#### **PROMOTIONS**

There were no promotions this year.

#### **RESEARCH GRANTS**

Several faculty were successful in grant capture: Dr. Keshavjee (Canadian Cystic Fibrosis Foundation. Tissue Remodelling and the Immune Response in Obliterative Bronchiolitis After Lung Transplantation. PI Dr. Shaf Keshavjee \$331,501), Dr. Yasufuku (CIHR. Porphysome nanoparticle-enabled minimally invasive transbronchial photothermal ablation of lung cancer, Co-investigator, Project Lead, Dr. Kazuhiro Yasufuku \$756,699 and NSERC -CIHR Collaborative Health Research Program. Non-linear multimodal microendoscopy for lung cancer pathology. Co-I Dr. Kazuhiro Yasufuku \$531,0000). Our partners in the McMaster program were also very successful last year: Dr. Christian Finley (Hamilton Academic Health Sciences Organization/McMaster Surgical Associates Research Innovation Grant: Patient Education and Support in Fast Track Thoracic Surgery. PI Dr. Christian Finley. \$30,000, Juravinski Cancer Centre Foundation: Design and Evaluation of a Synoptic Operative Report for Lung Cancer. Co-PI Dr. Christian Finley. \$24,355, Juravinski Cancer Centre Foundation.

Design and Evaluation of a Synoptic Operative Report for Lung Cancer Co-PI Dr. Christian Finley \$25,000, McMaster Surgical Associates. Development of a Gastrointestinal Stent. PI Dr. Christian Finley \$24,350) and Dr. Yaron Shargal (Hamilton Academic Health Sciences Organization (HAHSO)/McMaster Surgical Associates: The effect of the perioperative Non-Steroidal Anti-Inflammatory Drug Naproxen on pleural effusion formation after major lung resection. PI Dr. Yaron Shargal \$29,519, Ontario Thoracic Society/The Lung Association. The effect of perioperative Non-Steroidal Anti-Inflammatory Drug Naproxen on pleural effusions formation after lung resection. PI Dr. Yaron Shargal \$49,680)

#### **RESIDENT/FELLOWS HONOURS AND AWARDS**

One of the current clinical residents, Dr. Wael Hanna, has won a Astral Media Fellow Award from McGill University. Dr. Hanna also won the Best Clinical Research paper at Pearson Day in June 2012, while Dr. Tiago Machuca (a research fellow working with Dr. Keshavjee) won the Best Basic Science Research Paper. Dr. Siba Haykal, a Plastic Surgery resident working in the laboratory of Dr. Waddell had an outstanding academic year in 2011-2012. She won the Best Basic Science Research Award at the Canadian Society of Plastic Surgeons, was a finalist in the Alan Wu Poster Competition at the Institute of Medical Science Research Day. She was the recipient of several Post-Graduate Medical Education Awards, such as the William S. Fenwick Research Fellowship, the Edward Christie Stevens Fellowship in Medicine and the Joseph M. West Family Memorial Fund Award. She also received the extremely competitive Vanier Canada Graduate Scholarship from CIHR. Dr. Jon Yeung won first place in the Gallie-Bateman competition for his research undertaken under Dr. Keshavjee's supervision. Dr. Stephane Collaud, a clinical fellow from Zurich Switzerland was selected for the very prestigious Evarts A Graham Travelling Fellowship from the American Association for Thoracic Surgery. Dr. Yaqoob Al-Sawafi won the 2011-2012 F. Griffith Pearson Award for Best Resident/Fellow Teacher.

#### **FACULTY HONOURS AND AWARDS**

Dr. Chris Compeau won the Outstanding Surgical Teacher at St. Joseph's Hospital last year. Dr. Gail Darling has accepted major roles in important Thoracic Surgery organizations. She is now Chair of the Thoracic Surgery Specialty Committee of the Royal College and

Chair, Board of Regents for the International Association for the Study of Lung Cancer. She is a member of the Executive Committees of Lung Site Committee for National Cancer Institute of Canada Clinical Trials Group, and the General Thoracic Surgery Club. Several national and international special recognition awards were received by Dr. Shaf Keshavjee in recognition of the transformative impact that Ex Vivo Lung Perfusion (and organ repair in general) is having on the field of organ transplantation. These were the Zellers Senior Scientist Award (Cystic Fibrosis Canada), the Distinguished Lecturer in Respiratory Science Award (CIHR Institute of Circulatory & Respirology Health & Canadian Thoracic Surgery) and the Roche Award for Excellence in Science (The Transplantation Society). Dr. Tom Waddell is now the Thomson Family Chair in Translational Research. Dr. Kazuhiro Yasufuku won the Best Referenced Paper Award (Japanese Association for Thoracic Surgery). Teaching awards were awarded to Dr. Gail Darling (Gail E. Darling Award for Excellence in Undergraduate Teaching) and Dr. Tom Waddell (Robert J. Ginsberg Award for Excellence in Postgraduate Teaching).

#### **VISITING PROFESSORS**

Visiting Professors for 2011-12 were: Dr. Sean Grondin from University of Calgary who spoke about the challenges in thoracic surgery education and manpower planning for Canada. Dr. Malcolm Brock, from Johns Hopkins Medical School spoke on epigenetic regulation of malignancy and novel strategies for chemotherapy, and Dr. David Sugarbaker, from the Brigham and Women's Hospital and Harvard Medical School who attended as the Kergin Lecturer for the Department of Surgery. Dr. Sugarbaker spoke about his success in uniting a diverse group of surgeons and hospitals into a powerful network. Another highly successful Toronto Thoracic Surgery Refresher Course was held in June 2012 and included the following Visiting Faculty - Dr. Robert Cerfolio (Alabama), Dr. Drew Bethune (Halifax), Dr. Nasser Altorki (New York) and Dr. Eugenio Pompeo (Rome). Prior to the Refresher Course the annual EBUS Training Course was again hoasted by Dr. Kazuhiro Yasufuku. The academic year concluded with Pearson Day, an annual celebration of clinical and laboratory research by trainees in our Division. The Pearson Day Visiting Professor was Dr. Eric Vallieres from Seattle.

#### **DIVISION FIRSTS**

New programs have been initiated by the Division of Thoracic Surgery. For example, at the UHN site the LungMets Program allows patients with malignancy metastatic to the lung to be evaluated by both Thoracic Surgeons and Radiation Oncologists. In October 2011, a program in Robotic Thoracic Surgery was initiated by Dr. Yasufuku and he performed the first robotic lobectomy in Canada shortly thereafter. The University of Toronto-McMaster Joint Program in Thoracic Surgery took another step forward with the first interchange of a clinical fellow, Dr. Nir Golan, who has spent a portion of his training both in Toronto and Hamilton.

#### **LEADERSHIP CHANGES**

Dr. Carmine Simone, long standing member of our Division of Thoracic Surgery at the University of Toronto with a major role in critical care is now the Surgeon-in-Chief at Toronto East General Hospital. Dr. Abdollah Behzadi has assumed leadership of Undergraduate Education for the Division of Thoracic Surgery.

#### **ROYAL COLLEGE FELLOWSHIPS**

Our previous trainees, Dr. Sameena Uddin and Sal Privitera passed their Royal College examinations in October 2011 and we welcome to the community of colleagues. Dr. Yaqoob Al-Sawafi has completed his Thoracic Surgery residency and will sit his exams this fall. Clinical Fellows completing additional training in 2011-2012 academic year included Tetsuzo Tagawa (Kyushu Medical School), who studied both Thoracic Surgery and Lung Transplantation. Drs. Henrique Nietmann (Serra dos Orgaos Foundation Medical School, Brazil), Tetsu Yamada (Kyoto University), and Bill Lynch (University of Iowa) completed advanced training in Lung Transplantation. Dr. Lianne Castle broke new ground as the first fellow to complete advanced training with Dr. Yasufuku in Interventional Bronchology as a respirologist.

In conclusion, 2011-2012 continued the tradition of excellence in surgery and scholarship for which the University of Toronto Division of Thoracic Surgery has earned a world-wide reputation. I thank each and every Faculty member, clinical Thoracic Surgery resident, Thoracic Surgery and Lung Transplant fellow, and research trainee for their important contribution to building and sustaining this stature. I would especially like to acknowledge the special contribution of Ms Nina Chana, our Administrative Coordinator, to the success of our Division.



21 **George Armstrong Peters Prize, Gallie Day:** Teodor Grontcharov, Andy Smith..



## **Division Of Urology**

Dr. Herschorn, Chair

#### **ACADEMIC PROMOTION**

Dr. Jack Barkin was promoted to Associate Professor.

#### **HIGHLIGHTS**

#### **SICKKIDS**

**Dr. Joao Pippi-Salle** continued as the Site Chief of Urology at Hospital for Sick Children.

He was an invited speaker, surgeon, and visiting professor at many locations around the world.

**Dr. Darius Bagli** continued his basic research in bladder diseases with projects funded by the CIHR, PSI, Kidney Foundation, AUA Foundation, and the Society for Pediatric Urology. He is also supervising research fellowships with funding from the Society for Pediatric Urology and the AUA Foundation. He was also invited to lecture in Europe and North America and won 3rd Prize for his work from the European Society for Pediatric Urology. He also served as Deputy Chief of Surgery at Hospital for Sick Children and staff coordinator of Urology Resident Research.

**Dr. Walid Farhat** continued his work in tissue engineering with projects funded by The Hospital for Sick Childrens Foundation and the Dean's Fund. He participated in projects funded by the Ontario Research Fund and Canadian Foundation for and the Center for Computer-Assisted Intervention and Innovation.

He organized and directed the 6th Annual North American Pediatric Fellows Laparoscopy Course.

He was an invited speaker both within and outside of North America.

**Dr. Armando Lorenzo** continued his work in Clinical Epidemiology and minimally invasive pediatric surgery. He has also been critical in coordinating resident surgical skills sessions.

He continued his research work in projects funded by the Hospital for Sick Children Inaugural Innovation Fund, PSI, and the Medical Council of Canada.

He was an invited speaker in Europe and North America and was awarded the A.W. Bruce Undergraduate Teaching Award.

**Dr Martin Koyle** continued his clinical research in pediatric urology. He had numerous visits as visiting speaker/professor throughout the globe

#### **MSH**

**Dr. Ethan Grober** continued his work on male infertility at Mount Sinai and Women's College.

His research includes his projects in infertility and education with grants from PSI Foundation, Royal College of Physicians and Surgeons of Canada, MARS Innovation, CIHR, Canadian uro-Oncology Group, and the Association for Surgical Association.

He was an invited speaker in the U.S. and Canada and will assume role as coordinator for the Urology School lecture series.

**Dr. Keith Jarvi**, site chief at MSH, continued the Male Infertility Program and as Director of the The Murray Koffler Urologic Wellness Centre (MKUWC). He was an invited speaker in the U.S. and Canada.

He continued work in his work and research in Infertility with projects funded by the NIH, Ontario Institute for Cancer Research, CIHR, Canadian Uro-Oncology Group, MaRS Innovation, Canadian Cancer Society Research Institute, Institut Merieux, Canadian Uro-oncology Group, PSI, and with non-peer review grants from GSK and Pierre Fabre Medicaments

**Dr. Kirk Lo** continued his basic research in Infertility with a multi-year grant funded by the National Institutes of Health and in projects funded by CIHR, MaRS Innovation, Canadian Cancer Society Research Institute, Canadian Uro-oncology Group, and PSI.

He organized the resident and fellow presentations for the Annual Robson Research Day

He was an invited speaker in the U.S. and Canada.

**Dr. Alexandre Zlotta** continued in his position as Associate Editor of European Urology, one of the premier journals in urology.

He was invited speaker and/or Visiting Professor to Europe, Asia and South America. He continued his research with funding from Ontario Institute for Cancer Research, CIHR, Canadian Cancer Society Research Institute, and the Canadian Uro-oncology Group.

#### **SUNNYBROOK**

Dr. Lesley Carr continued her work as an investigator in an industry grant for the use of muscle stem cells in stress urinary incontinence as well as research in overactive bladder and interstitial cystitis with projects funded by Allergan, Astellas, and Pfizer. Dr. Carr is in charge of Journal Seminars for Urology residents.

Dr. Sender Herschorn continued as University Chair and Martin Barkin Chair in Urology.

He continued his clinical research in urinary incontinence, neurogenic bladder overactivity, and erectile dysfunction with projects funded by Allergan, Astellas, and Johnson and Johnson (Contura). He was invited speaker and lecturer in Latin America, Europe and Asia..

He was elected General Secretary of the International Continence Society in September 2011 for a 3 year term

He also directed the 19th annual U of T Urology Update.

Dr. Laurence Klotz continued his research in Urooncology. He continued as Chair of the CURC and the World Uro-Oncology Federation, (WUOF), and the International Urologic Research Society.

He continued his many peer-reviewed research projects as well as initiated new work in prostate cancer with funding from NCIC, Prostate Cancer Canada, CIHR and Ferring. He was guest speaker and visiting professor in Asia, UK, Europe, South and North America.

He was awarded a Queens Diamond Jubilee medal in Spring 2011.

Dr. Ron Kodama, site Chief at Sunnybrook, organized the 12th Annual Resident Basic Science Course in February. He also directed the annual Urology Fair 2012.

He won the Faculty Postgraduate Teaching Award in 2012. Dr Kodama also chaired a plenary session at the American Urological Association Meeting.

Dr. Robert Nam continued his work on his peerreviewed projects. His funding is currently from NCIC and CIHR.

He was an invited speaker in many places within and outside North America. He was awarded the Ajmera Chair in Urologic Oncology and had a Journal of The National Cancer Institute publication in 2012. Dr Nam also received the Faculty Postgraduate Teaching Award in 2012.

He continues as Vice-President of the Medical Staff Association at Sunnybrook.

Dr. Vasundara Venkateswaran was promoted Associate Professor. She continued her basic research in prostate cancer with funding from CIHR, Prostate Cancer Canada and Ferring.

Dr Venketeswaran also has assumed a major role at the Institute of Medical Sciences as Graduate Coordinator.

#### **UHN - TGH AND PMH**

Dr. Neil Fleshner continued as site chief at the UHN. He continued his clinical and basic research in prostate cancer with many major peer-reviewed grants from CIHR, OICR, CPCRF, Canadian Cancer Society Research institute, Prostate Cancer Canada Research Foundation, Prostate Cancer Research Foundation, NIH, and GSK.

He was invited speaker at meetings in Canada, U.S. Israel, Asia and Europe. He also served as chair of the 4th Annual Uro-Oncology Dialogue meeting in Niagara on The Lake.

He continued as the holder of the Love Chair in Prostate Cancer Prevention at the Princess Margaret Hospital and had a publication the Lancet medical journal..

Dr Fleshner was awarded a Queens Diamond Jubilee Medal in the Spring of 2012.

Dr. Michael Jewett continued his clinical and research work in many peer-reviewed funded projects in Uro-Oncology. The Funding is from CIHR, OICR, Princess Margaret Hospital Foundation, Kidney Foundation, NSERC, Pfizer, and Merck-Frosst.

He continued as the Wyeth/CIHR Clinical Research Chair in Oncology.

He was an invited speaker and/or visiting professor in North America, Europe, Middle East and Asia.

He won the Faculty Postgraduate Teaching Award (Surgical) in 2012.

Dr. Michael Robinette continued as the major individual contributing to the Multi-organ transplant program at the UHN, specifically in kidney transplants.

Dr. John Trachtenberg continued his active research into novel therapies for prostate cancer with grants from CIHR, PMH Foundation, Prostate Cancer Canada and NCIC. He was invited speaker in Europe, the U.S., and Canada.

He co-chaired the 21st Annual Issues and Controversies in Whistler, BC.

**Dr. Tony Finelli** continued his funded research projects in renal cancer and in men with negative biopsies for prostate cancer. Funding is from CIHR, Canadian Cancer Society research Institute, Merck-Frosst, and Pfizer.

He was invited speaker in Europe, US, and Canada.

He won the Michael Jewett Postgraduate teaching award and the Bernard Langer Surgeon Scientist Award in 2012.

Dr. Andrew Matthew, clinical psychologist, continued his work in outcomes after prostate cancer therapy. The PMH Foundation funds his projects. He was an invited speaker in the Canada.

Dr Girish Kulkarni had a banner first year as a junior investigator/surgeon scientist securing peer-reviewed grants from Canadian Urologic Association, CIHR and a salary support award from prostate Cancer Canada. He continues his epidemiological research in bladder and prostate cancer.

#### **UHN - TWH**

**Dr. Magdy Hassouna** continued his basic and clinical work in neurourology and neuromodulation. Research funding was received from the Ontario Neurotrauma Foundation, and CIHR.

He was an invited speaker in Asia, Middle East, Europe and North America.

**Dr. Sidney Radomski** continued his role as the Urology coordinator in the Surgical Skills Lab and director of the weekly postgraduate urology resident seminars. He continued his work in incontinence, overactive bladder and erectile dysfunction.

He continued as the Assessor of Educational Performance for the Department of Surgery.

#### ST. MICHAEL'S HOSPITAL

**Dr. Kenneth Pace** commenced as site chief as St Michaels Hospital. He continued his work in clinical epidemiology, stone disease, and Minimally Invasive Surgery. Grant funding is from Ontario AFP Innovations Fund, and LMA Urology USA.

He continued as the Fellowship Coordinator for the Division of Urology.

He continued in the American Urological Association Leadership Program.

**Dr. John Honey** continued his work as Director of Endourology and the Stone Treatment Centre at SMH.

He continued his clinical research studies in lithotripsy. He was course director at a Hands-on course at the American Urological Association (AUA) Meeting in Atlanta. He was guest speaker in the U.S. and Canada

**Dr. Robert Stewart** continued as Urology Residency Program Director and director of undergraduate surgery education at SMH. He continued as the principal urologist in the kidney transplantation program.

He won the Faculty Postgraduate Teaching Award (Surgical).

**Dr Jason Lee** commenced his first year in practice engaged in education-based research and minimally invasive surgery .Dr Lee will assume a major role in core curriculum development for undergraduate education.

#### **ACADEMIC EVENTS & AWARDS**

The Annual Charles J. Robson Research Day was held on April 12. The Visiting Professor was Dr. Roger Dmochowski, Professor of Urology Vanderbilt University in Nashville USA.

There were 39 presentations. Resident Clinical winner was **Dr. Christopher Wallis**; Resident Basic/ Translational **Dr. Justin Lee**; Fellow Clinical winner was **Dr Michael Ordon**; Fellow Basis/Translational winner was Andrei **Drabovich**.

The Patrick Harty Award for Excellence in Patient Care was awarded to Dr. Justin Lee.

The PGY-5s Drs. Stephanie Tam, Benjamin Johnson, Melise Keays, and Steve Kim, successfully completed their Royal College Examinations.

#### **VISITING PROFESSORS**

Guests this year were Drs. David Crawford, University of Colorado; Jason Efstathiou, Massachusetts General Hospital; Craig S. Niederberger, University of Illinois; David Penson, Vanderbilt University; Curtis Pettaway, University of Texas; Curtis Nickel, Queens University; Marshall Stoller, University of California San Francisco.



22 SpineFEST 2012: The Old Mill Inn, June 15, 2012.

University of Toronto | Department of Surgery 2011-2012 Annual Report | **36** 



# Division of Vascular Surgery

Dr. Lindsay, Chair

A new year, a new resident training program. This was the inaugural year of the Royal College Direct entry Vascular Surgery Program. Universities across Canada mobilized to submit applications for the five year direct entry Royal College program in Vascular Surgery, initiate a CaRMS selection process and accept the first applicants. These enormous tasks were masterfully completed by Dr George Oreopoulos during his first year as the Vascular Surgery Program Director.

New Division Heads were named at Sunnybrook, Dr Andrew Dueck and University Health Network, Dr Thomas Lindsay who was also appointed the R. Fraser Elliott Chair in Vascular Surgery.

Dr Michael Ameli officially retired from St Michael's Hospital as of June 30th 2012. A retirement dinner was held in his honor with previous trainees attending from Calgary, Peterborough and across Toronto. Dr Ameli's prolific contributions in teaching and administration at the local, national and his presence at international meetings will long be remembered.

Dr Mark Wheatcroft joined the staff at St Michael's Hospital as Dr Vern Campbell has changed his focus to dialysis access surgery. He joins Dr Tony Moloney further strengthening the academic component of the St Michael's Hospital division.

The first Vascular Surgery Research Day was held in June 2012 with Dr Joseph Mills delivering the inaugural K. W. Johnston Lecture on "What is Critical Limb Ischemia?" The returning alumnus lecture was given by Dr April Boyd titled "Computational Fluid Dynamics Analysis of AAA – Expansion and Rupture". In the resident competition, Dr William Johnson was awarded second prize for his talk "Complement Mediated Injury After Ruptured Abdominal Aortic Aneurysm". First prize went to Dr. Varun Kapila for his talk entitled "Risk stratification of plaque and parenchymal risk: Identification of high-risk asymptomatic carotid artery stenosis using a novel MRI technique ".

The Division celebrated several firsts in new minimally invasive procedures. A multidisciplinary team of physicians including Dr. George Oreopoulos, Dr. Doug Ing and Dr. Dheeraj Rajan at UHN did the first renal denervation procedure for refractory hypertension in Canada in January 2012. In May 2012, the first in North America Anaconda Fenestrated EVAR stent graft for juxtarenal aneurysms was implanted by Drs. Leonard Tse and KT Tan at UHN.

#### **ADMINISTRATION**

The Division continues to have a significant administrative and advocacy role in Vascular Surgery in Ontario. Dr. Wayne Johnston has been the Co-Chair with Kori Kingsbury of CCN of the Vascular Advisory Committee which produced two reports for the Ontario Ministry of Health – "Access to EVAR in Ontario: Observations and Recommendations" and "A Vascular Services Quality Strategy for Ontario: Observations and Recommendations". Drs Lindsay, Dueck and Pope also served on the writing committee. It is hoped these reports will help shape the future of Vascular Care in Ontario

Dr. Rubin is the Program Medical Director of the Peter Munk Cardiac Centre, Chair of the Ontario Expert Panel on Appropriate Utilization of Diagnostic and Imaging Studies, Co-Chair of the Ontario Expert Panel on Multiple Sclerosis and a member of the CIHR expert Panel on Multiple Sclerosis research. He also continues as the Chairman and CEO of the MSH /UHN Academic Medical Organization and represents all AHSC AFP Governance Chairs in Ontario on the Academic Medicine Steering Committee. He has also joined Health Canada Scientific Advisory Committee for Devices used in the Cardiovascular System. Dr. Tanner is the Chairman of the OMA Negotiating Committee for a 2012 Framework Agreement for the Physicians of the Province of Ontario with the Ministry of Health and Long Term Care. Dr. Andrew Dueck has become the Head of the Vascular Surgery section at the OMA and co-organized the VITO and Toronto EndoVascular Symposium with Dr Wooster in 2012. Dr Lossing was appointed the Medical Director of Telemedicine St. Michael's Hospital and is on the executive committee as a North American Representative to the International Society of Vascular Surgery. Dr Johnston continues as the Chair of the Document Oversight Committee (practice guidelines, reporting standards, and policies) for the Society for Vascular Surgery. Dr Dueck was named to the CSVS Executive Committee, the AFP board at Sunnybrook as well as the Executive committee for the Schulich Heart Program.

#### **EDUCATION**

Drs. William Johnson and Gus Azoubel completed their Royal College Fellowships in Vascular Surgery. Dr Luis Figueroa and Dr Raphael Gonzalvez each completed a one year Fellowship in Vascular Surgery. The Division welcomed Dr. Mohamad Hussain, Dr. Raphael Gonzalvez and Dr. Trisha Roy as the first direct entry trainees in the new five year Royal College training program. Drs Aaron Lo and Sydney Wong both transferred into the five year program at the PGY 3 level. Dr. Jonathnan Cardella was the recipient of the CSVS 2012 John L. Provan Educational Award for a project titled "A Simulation Based Course for Teaching Endovascular Skills to Vascular Surgery Trainees".

#### **RESEARCH**

Dr. Rubin continues to hold three independent basic science operating grants from CIHR. He has had a career year for publications, with papers in Circulation, Nature, PloS One and the Journal of Biological Chemistry, and was visiting Professor in Goethe University, Frankfurt. In addition, he completed a 4 year term as Chair of the Grant Review Panel for the Foundation for Accelerated Vascular Research, San Francisco. Dr Dueck presented findings regarding chronic cerebrospinal venous insufficiency in Multiple Sclerosis to the CHIR expert panel, and at the 2nd annual ISNVD meeting. He and co-authors published a meta-analysis in the CMAJ on the association between chronic cerebrospinal venous insufficiency and Multiple Sclerosis.



23 Strat Plan Meeting: James Rutka.



27 Strat Plan Meeting: Jay Rosenfield.



24 Strat Plan Meeting: Saäd Rafi



26 Strat Plan Meeting: David Latter.



25 Strat Plan Meeting: Bob Bell.



28 Strat Plan Meeting: Mark Bernstein.

University of Toronto | Department of Surgery



# The Hospital for Sick Children

James Wright, Surgeon-in-Chief/Robert B. Salter Chair in Surgical Research

#### **HEADS OF DIVISION**

Dr. G. Van Arsdell
Dr. J. Langer
Dr. J.M. Drake
Dr. B. Alman
Cardiac Surgery
General Surgery
Neurosurgery
Orthopaedics

Dr. C. Forrest Plastic and Reconstructive Surgery

Dr. J. Pippi Salle Urology

he Department of Surgery at The Hospital for Sick Children has had a productive year. Dr. James Wright continues to lead the Canadian Paediatric Surgical Wait Time Project. The project measures wait times for children's surgery in 11 surgical subspecialties. In June 2012, the project contributed high-level findings to the Wait Time Alliance 'Report Card on Wait Times' for the third year and reported their finding that 31% of children continue to exceed- nationally developed access targets. The project currently focuses on generating benchmark reports and supporting knowledge sharing for its participating hospitals. The project is transitioning towards data collection and reporting by the Canadian Association of Paediatric Health Centres - Canadian Pediatric Decision Support Network in 2013.

Targeted funding from the Ministry of Health and Long-Term Care continues to make a substantial impact on wait time for surgery at SickKids. While waits are still not ideal, the percentage of children who exceed nationally developed access targets has dropped from a high of 47% in 2007 to 18% in 2012.

#### **NEW STAFF:**

There were no recruits from July 2011 to June 2012.

#### **DEPARTURES:**

There were no departures from July 2011 to June 2012.

#### **APPOINTMENTS & PROMOTIONS**

Dr. Annie Fecteau was appointed Interim Head of the Division of General and Thoracic Surgery. Dr. Michael Taylor, Division of Neurosurgery, was appointed to Senior Scientist at The Hospital for Sick Children's Research Institute. Dr. James Rutka, Division of Neurosurgery, was appointed Chair of the Department



of Surgery at the University of Toronto. Dr. Christopher Forrest, Division of Plastic Surgery, was appointed Interim Chair of the Division of Plastic Surgery, University of Toronto.\_

#### **DIVISION OF CARDIOVASCULAR SURGERY**

The Labatt Family Heart Centre (of which the division is a key participant) underwent a 10 year external review led by three well known individuals from Children's Hospital Philadelphia and The Children's Hospital, Boston. The following is a quote that opens their summary: "The reviewers unanimously found the Heart Centre at the Hospital for Sick Children

University of Toronto | Department of Surgery 2011-2012 Annual Report | **41** 



to be a premier pediatric cardiovascular centre, with superb performance in domains of clinical care, clinical research, academic scholarship extramural funding, and education." The grand vision is to build an institute - a direction we believe will be necessary to maintain leadership and to improve the field.

Over the past five years the division has had the second highest level of publication impact points, with respect to congenital heart surgeons' publications, in the world. Members of the division continue to be invited to speak at major congenital cardiac forums around North America and the world.

Dr. Chris Caldarone received a clinical trial grant from the Heart and Stroke foundation, Dr. Osami Honjo maintains several startup grants, and Dr. John Coles continues in his CIHR grant studying integrin-linked kinase in tetralogy of Fallot. Dr. Glen Van Arsdell completed his clinical proof of concept Heart and Stroke grant.

Members of the division presented 23 invited lectures and others presentations, published 21 papers and hold 20 grants.

#### **DIVISION OF GENERAL AND THORACIC SURGERY**

After 12 years, Dr. Jack Langer has stepped down as Division Head and Dr. Annie Fecteau assumed the Interim Head position while the search for a new Division Head is being conducted. Dr. Langer has been elected and is now the President of the Canadian Association of Pediatric Surgeons for a two-year term.

Dr. Ted Gerstle is involved in a number of important initiatives with SickKids International including the development of training programs to build perioperative capacity and surgical expertise in Africa, and the development of perioperative services at a new children's hospital in the Middle East. Dr. Gerstle was named Chair of the Canadian Association of Pediatric Surgery Program Training Directors.

Dr. Georges Azzie was the recipient of the Herbie Fund Doctor of the Year Award for his work in developing countries and the Bruce Tovee Award as the best teacher in surgical undergraduate education.

Dr. Paul Wales continues in his role as Director of The Group for Improvement of Intestinal Function and Treatment (GIFT), the only formalized program for intestinal failure in Canada. The program treated its 200th patient this year and his neonatal piglet model of short bowel syndrome is supported by CIHR. Dr. Wales had several invitations as visiting professor and has been asked to write clinical guidelines for the use of intravenous lipid emulsions for patients with intestinal failure by the American Society of Parenteral and Enteral Nutrition.

Dr. Priscilla Chiu continues her work as co-principal investigator on a multi-million dollar CIRM-CSCC grant in support of novel treatments to target cancer stem

Dr. Sharifa Himidan continues in her role as Medical Director of the Centre for Image Guided Innovation and Therapeutic Intervention. Dr Himidan is also working on establishing programs that bridge relationships between academic and community centres affiliated with the University of Toronto.

SickKids 'Liver Transplant Program had a record year last year with 30 pediatric liver transplants. The program was highlighted as having the lowest hepatic artery thrombosis rate of all the 27 centres participating in the Study in Pediatric Liver Transplant (SPLIT).

Members of the division presented 50 invited lectures and others presentations, published 41 papers and hold 10 grants.

#### **DIVISION OF NEUROSURGERY**

Dr. James Drake has been appointed in the role of Director, Image Guided Innovation and Therapeutic Intervention. He continues to lead the Canadian Pediatric Neurosurgery study group. Drs. Drake and Kulkarni continue to be heavily involved in the research and quality improvement initiatives lead by the HCRN (Hydrocephalus Clinical Research Network).

Dr. James Rutka was appointed Chair of the Department of Surgery at the University of Toronto. He was also inducted as a Fellow of the Royal Society of Canada.

Dr. Peter Dirks has been involved with global hospital initiatives in addition to his numerous research activities.

Dr. Abhaya Kulkarni, Residency Program Director, has been elected to membership in the Society for Neurological Surgeons. In an effort to enhance undergraduate education opportunities in our division, Dr. Kulkarni has been appointed to this role for the SickKids site.

Dr. Michael Taylor was appointed to Senior Scientist, The Hospital for Sick Children Research Institute.

We welcomed Dr. Richard Ellenbogen, Professor and Theodore S. Roberts, Endowed Chair of Pediatric Neurological Surgery at the University of Washington, to the Hospital for Sick Children as our 26th E. Bruce Hendrick Visiting Professor in Pediatric Neurosurgery. Dr. Ellenbogen delivered two excellent talks, "Neurosurgery in Difficult Locations: The Case for Pineal Region" and "Concussion: Education & Advocacy".

#### **INVITED SPEAKERS/VISITING PROFESSORSHIPS:**

Dr. James Drake was invited across the globe as far as Japan, discussing topics such as surgical management of hydrocephalus, robotics and imaging simulation, in utero repair of myelomeningocele and endoscopic third ventriculostomy.

Dr. James Rutka was invited around the world in places such as Japan, Memphis, Baltimore, Washington, Indianapolis and Australia.

Dr. Michael Taylor visited Whistler, Niagara Falls, Atlanta and Genoa.

Dr. Peter Dirks was invited to Barcelona, Heidelberg, Massachusetts and Montreal.

Members of the division presented 67 invited lectures and others presentations, published 95 papers including in Nature and Cancer Genetics and hold 36 grants.



#### **DIVISION OF ORTHOPAEDIC SURGERY**

Dr. Benjamin Alman was elected to a Fellowship in the Canadian Academy of Health Sciences. Dr. Alman also continues as the interim Director of the Toronto Musculoskeletal Centre of the University of Toronto.

Dr. Unni Narayanan received the Dr. John Whittaker Memorial Cerebral Palsy Award, at the Bloorview Research Institute, Toronto, Ontario, Canada (Distinction, Specialty: Orthopaedic Surgeon and Clinical Researcher).

Dr. James Wright was awarded the John Sharrard Memorial Medal, from the British Society Children's Orthopaedic Surgery, to recognize academic contributions to children's orthopaedics.

Dr. Andrew Howard successfully ran the 12th Bethune Round Table Conference in Toronto.

The division hosted Dr. Peter Newton, Orthopaedic Surgeon, Rady Children's Specialists of San Diego and President of POSNA, as our Robert B. Salter Visiting

We hosted Dr. Michael Sussman, staff orthopaedic physician, Shriners Hospital for Children Research, Portland, OR, as our Mercer Rang Visiting Professor.

The Division of Orthopaedics is continuing to build the Bone Health Centre focusing on the care of children with musculoskeletal conditions requiring multidisciplinary care, and in the development of collaborative research.

The division boasts four faculty members who hold CIHR funding as primary investigators, making them the highest proportion of CIHR funded orthopaedic surgeons in any one division in the country.

Members of the division presented 75 invited lectures and others presentations, published 42 papers and hold 32 grants.

#### DIVISION OF PLASTIC AND RECONSTRUCTIVE SURGERY

This has been a productive year for the division that is the largest group of full-time pediatric plastic surgeons in North America. Dr. Greg Borschel was awarded the Early Researcher Award (ERA) by the Ontario Ministry of Economic Development and Innovation. Dr. Borschel was chosen as the new Deputy Editor for the Journal of Plastic Reconstructive and Aesthetic Surgery. Tessa Gordon, PhD was the recipient of the Integra Foundation David G. Kline Lectureship at the Annual American Association of Neurological Surgeons meeting, the only non-surgeon to win this award. Tessa Gordon was also the inaugural recipient of the Hanno Millesi Award in Vienna for her unique contributions to the research of peripheral nerves. Drs. Borschel and Gordon were awarded a CIHR Operating Grant for their proposal entitled "Improving recovery after peripheral nerve injury."

Drs. Ron Zuker and Greg Borschel will be submitting their proposal on Vascularized Composite Allotransplantation in the pediatric population to the Ministry of Health and Long-Term Care in the upcoming year.

Dr. Zuker has established a SickKids-India Educational Exchange Program.

The 8th Annual Lindsay-Thomson Pediatric Plastic Surgery was held in June 2012 with 80 attendees and Professor Yu-Ray Chen visiting from Taipei, Taiwan as the Vale Visiting Lecturer.

Post-graduate fellowship education in pediatric plastic surgery continues to be a high point in the division profile with 99 applicants for the five-fellow positions.

Dr. Christopher Forrest was appointed Interim Chair of the Division of Plastic Surgery at the University of Toronto.

Members of the division presented 87 invited lectures and others presentations, were visiting lecturers at the Mayo Clinic, Melbourne, Sydney, Kyoto, Okinawa, Kathmandu, Edmonton, Baltimore, and Pisa, published 24 papers and hold 22 grants.

#### **DIVISION OF UROLOGY**

Dr. Pippi Salle was awarded the Chair in Urology by the Women's Auxillary at SickKids. He was a visiting professor and attended many meetings in countries such as the United States, France, Brazil, Russia, Italy, Kuwait and Qatar.

Dr. Martin Koyle was the visiting professor in Dallas, Italy and England. He was also one of the primary invited surgeons to the International Society on Hypospadias and Disorders of Sex Development in London. Dr. Pippi Salle was President of that organization at that time. Dr. Koyle was invited to be the Visiting Professor at Dalhousie University in Halifax.

Dr. Darius Bagli was named the Distinguished Mentor for 2012 by the American Urological Association Foundation. This was the first time the award was made to a urologist in Canada, and the first ever for a pediatric urologist.

Dr. Karen Aitken, PhD, Dr. Bagli's principal laboratory research associate, received a Basic Science Postdoctoral Award from the American Urological Association Foundation.

Dr. Walid Farhat successfully ran his 5th annual Pediatric Urology Laparoscopy course for all pediatric urology fellows across North America. Dr. Farhat was also a co-applicant for a successful grant from the Heart and Stroke Foundation entitled "Strategies for MRI assessment of microvessel integrity in Angiogenesis." In addition, he also co-chaired the Canadian Urology Association Laparoscopy course for the 4th year, held in Montreal. He was also a visiting professor in Iran and Kuwait. Dr. Farhat received the Award for Teaching Excellence for the Paediatric Resident Lecture Series, University of Toronto.

Dr. Armando Lorenzo was awarded a C17 grant for fertility preservation preferences in prepubertal boys. He also organized and chaired the Society for Fetal Urology meeting in Atlanta, GA and was awarded the A.W. Bruce Faculty Undergraduate Teaching Award, Division of Urology, University of Toronto.

Members of the division presented 48 invited lectures and others presentations, published 26 papers and hold 14 grants.



#### **EDUCATION:**

The Department of Surgery continues to have an active education program training 41 clinical fellows, 8 research fellows, and 102 residents originating from 29 countries worldwide.

#### **RESEARCH:**

Of 39 surgeons, 25 have funded research programs. The department is engaged in a wide variety of clinical and basic research supervising 19 research fellows, 16 Masters and 17 PhD students.



#### 29 The Surgical Exploration and Discovery Program 2012

## **Division of Cardiac Surgery**

Dr. C.A. Caldarone Professor Dr. J. Coles Professor

Dr. O. Honjo **Assistant Professor** Dr. G.S. Van Arsdell Professor (Division Head)

Dr. W.G. Williams Professor Dr. C. Wittnich Professor

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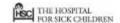
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Van Arsdell G, Chaturvedi R. Invited Commentary. June 2012; 93(6):2033-4.

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#### **INVITED VISITS**

Caldarone CA: Cincinnati Children's Hospital, United States, 15 July 2011. Invited Speaker: The Toronto Perspective on the Hybrid Strategy.

Caldarone CA: Congenital Heart Surgeons' Society, Chicago, Illinois, United States, 23 October 2011. Invited Speaker: 2011 CHSS Data Center Annual Report.

Caldarone CA: American Heart Association, Orlando, Florida, United States, 13 November 2011. Invited Speaker: Hybrid palliation, an answer or a question?

Caldarone CA: Phillips, Ontario, Canada, 7 January 2012. Invited Speaker: Caldarone, Christopher Ischemic preconditioning: An interesting concept or a clinical reality?

Caldarone CA: American College of Cardiology, Chicago, Illinois, United States, 26 March 2012. Invited Speaker: Surgery for Pulmonary Vein Stenosis: Outcomes and Expectations in the Current Era.

Caldarone CA: American Association for Thoracic Surgery, San Francisco, California, United States, 1 May 2012. Invited Speaker: Discussant for Aortic Valve Replacement in Neonates and Infants - Contemporary Outcomes in the STS Congenital Heart Surgery Database.

Caldarone CA: American Association for Thoracic Surgery, San Francisco, California, United States, 1 May 2012. Invited Speaker: Error: Is There a Performance Gap in HLHS?

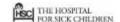
Coles J: HSC Heart Centre Biobank- International Symposium on Childhood Heart Disease, Toronto, Ontario, 18 October 2011. Invited Speaker: Stem Cells for Cardiac Disease Modeling.

Coles J: AHA, Orlando, Florida, 13 November 2011. Alterations in cardiac BRCA1 expression in human models of ischemia and reperfusion. National

Van Arsdell GS: Oregon Health and Science University, Portland, Oregon, United States, 4 August 2011. Invited Lecturer: The Failure of Morbidity and Mortality Review: How Sausages - Not Checklists - Can Impove Error in Complex Medicine.

Van Arsdell GS: S. Bert Litwin Lectureship, Milwaukee, Wisconsin, United States, 18 August 2011. (1) Invited Speaker: Health Care Lies, Statistics and Demagoguery: Perplexions of an American in Canada. (2) Invited Lecturer: The Failure of Morbidity and Mortality Review: How Sausages - Not Checklists - Can Improve Error in Complex Medicine.

Van Arsdell GS: Congenital Heart Surgeons Society, Chicago, Illinois, United States, 24 October 2011. Presenter: Adult Mustard Patients with An Arterial Transposition: Facing New Challenges.



Van Arsdell GS: The Society of Thoracic Surgeons, Fort Lauderdale, Florida, United States, 29 January 2012. Invited Lecturer: Decision Making in Pediatric Cardiac Surgery: Williams Syndrome (AS/PS).

Van Arsdell GS: The Asian Society for Cardiovascular and Thoracic Surgery, Bali, Indonesia, 9 March 2012. (1) Invited Speaker: Physiologic Versus Anatomic Repair of Congenitally Corrected TGA. (2) Invited Speaker: Common AV Valve: Atrioventricular Valve Repair in Patients with Single Ventricle. (3) Invited Speaker: Perioperative Monitoring - Toronto Experience.

Van Arsdell GS: American Association for Thoracic Surgery, San Francisco, California, United States, 28 April 2012. Presenter: Congenital Skills: Modified Konno (Aortic Valve Presentation).

Van Arsdell GS: Asia-Pacific Pediatric Cardiac Society, Taipei, Taiwan, Province Of China, April 2012. Invited Lecturer: HLHS Strategy (Norwood, Hybrid, Transplant) - Toronto Approach. (2) Invited Lecturer: Sutureless Repair in TAPVD: Primary/Secondary. (3) Invited Lecturer: Long-Term Outcome In Atrial Switch and the Intervention of Sutureless Technique for Primary and Secondary TAPVD or PV Stenosis.

Van Arsdell GS: American Association for Thoracic Surgery, San Francisco, California, United States, 1 May 2012. Presenter: Error: Is There a Performance Gap in HLHS?

Van Arsdell GS: Adult Congenital Heart Disease Symposium, Toronto, Ontario, Canada, 1 May 2012. Invited Lecturer: The Top 10 Challenges After Saving Lives for Congenital Surgeons.

Van Arsdell GS: Bermuda Hospitals, Bermuda, 15 May 2012. Invited Lecturer: Advances in Neonatal Surgery for Congenital Heart Disease. Other

#### **RESEARCH AND INVESTIGATIONS**

A Randomized Controlled Trial of Hybrid and Norwood Surgical Strategies for Single Ventricle Congenital Heart Disease. *Caldarone CA: Canadian Institutes of Health Research*. (\$707,219 2011 –2016).

Age-Dependent Vulnerability of Developing Brain to Cardiopulmonary Bypass-Associated Hypoperfusion and Ischemia in Neonates and Infants Undergoing Congenital Heart Surgery. *Honjo O: University of Toronto, Roscoe Reid Graham Scholarship in Surgical Science.* (\$75,000 2010 – 2013).

Antithrombin Enhancement May Improve Anticoagulation Efficiency in Infants Undergoing Cardiopulmonary Bypass Cardiac Surgery. *Van Arsdell GS, Gruenwald C: The Heart and Stroke Foundation.* (\$140,000 2010 - 2012).

Cardiovascular Biomarker Discovery and Validation. Coles J: Ministry of Health of Ontario, GL2-Ministry of Research and Innovations. (\$268,000 2010 - 2014).

Clinical Assessment of Thrombosis in Children after Heart Surgery: The CATCH study. *McCrindle BW, Manlhiot C, Gruenwald C, Brandao LR, Chan AK, Mertens L, Mital S, Holtby HM, Sivarajan VB, Schwartz S, Van Arsdell GS, Caldarone CA: Canadian Institutes for Health Research.* (\$1,514,330 2010 - 2015).

Clinical Assessment of Thrombosis in Children after Heart surgery: The CATCH study. Van Arsdell GS: Canadian Institutes of Health Research. (\$1,514,330 2010 - 2015).

Core: Clinical and Genomic Responses to Remote Ischemic Preconditioning. *Van Arsdell GS, McCrindle B: National Institutes of Health.* (\$1,054,577 2006 - 2011).

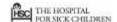
Determining the "Natural" and "Unnatural" history of Anomalous Aortic Origin of a Coronary Artery with Intearterial or Intraconal or Intramural course (AAOCA): Establishing a multi-institutional registry. Brothers J, Caldarone CA, Williams WG, McCrindle BW: Children's Heart Foundation. (\$100,000 2009 - 2011).

Developing and Validating a Simulation-Augmented Curriculum for Training Off-Pump Coronary Artery Bypass Surgery. *Caldarone CA: PSI Foundation.* (\$62,290 2011 –2013).

Development and validation of a Pediatric risk evaluative clinical index in the surgical environment (PRECISE) to predict adverse clinical outcomes after Pediatric Cardiac Surgery. *Caldarone CA: Heart and Stroke Foundation of Canada (HSFC).* (\$150,000 2011 – 2011).

Drug discovery High-throughput Screening using Pediatric Disease Targets. Coles J, Maynes J: HSC Department of Surgery. (\$8,580 2011).

Establishment of mechanically-assisted primary cavopulmonary connection physiology in infantile piglets: A proof of concept animal study. *Honjo O: Labatt Family Heart Centre, Research Grants*. (\$25,000 2011 - present).



Group Grant Leducq Foundation. A Transatlantic Network to Study the Mechanism, Mediators, and Clinical Applications of Remote Ischemic Preconditioning. *Caldarone CA and Redington A: Foundation Leducq.* (\$4,051,571 2007 - 2011).

ILK R211A as Therapeutic Target in Dilated Cardiomyopathy. Coles J: HSC Labatt Family Heart Centre Innovation Fund. (\$45,519 2009 - 2011).

Impact of diabetes on mitochondrial function and efficacy of cardiac remote ischemic preconditioning. *Caldarone CA: Canadian Diabetes Association.* (\$11,850 2011 - 2013).

Linking the Congenital Heart Surgery Database of the Society of Thoracic Surgeons (STS) with the Congenital Heart Surgeons' Society (CHSS) Database. *Jacobs JP, Caldarone CA, Jacobs ML, Jonas R, Mayer JE, Mavroudis C, Austin E, Pasquali S, Williams WG, Gaynor JW, Blackstone E, McCrindle B, O'Brien SM, Edwards FH, Shahian DM: The Children's Heart Foundation.* (\$199,973 2012 - 2013).

Mechanical lung assist as a means to achieve primary in-series palliation for single ventricle neonates: a proof of concept study in neonates and infants. Glen Van Arsdell, Div. of Cardiovascular Surgery, Merklinger SL, Guerguerian AM, Honjo O, Taylor KL: Heart and Stroke Foundation of Ontario, Research Grants. (\$38,055 2010 – 2011).

Mechanical Lung Assist as a Means to Achieve Primary In-Series Palliation for Single Ventricle Neonates: A Proof of Concept Study in Neonates and Infants. *Van Arsdell GS: The Heart and Stroke Foundation*. (\$77,133 2010 - 2012).

Pulmonary venous obstruction in congenital heart disease. *Caldarone CA: Saving Tiny Hearts Society.* (\$80,000 USD 2012 - 2013).

Role of integrin-linked kinase (ILK) in tetralogy of fallot. *Coles J: Canadian Institute of Health*. (\$426,341 2008 – 2012).

The effect of remote ischemic preconditioning on clinical and genomic responses to open heart surgery in children. *Redington A, Caldarone CA: Heart and Stroke Foundation of Ontario.* (\$570,399 2009 - 2012).

The effect of remote ischemic preconditioning on clinical and genomic responses to open heart surgery. Coles J, Redington A, McCrindle BW, Caldarone CA, Holtby HM, Schwartz SM, Van Arsdell GS, Coles JG, Ly LG, Scherer SW: Heart & Stroke Foundation of Ontario. (\$570,399 2009 - 2012).

Unbalanced Atrioventricular Septal Defect: A congenital Heart Surgeons' Society Inception Cohort Study. *Overman D, Caldarone CA, WG Williams, McCrindle BW: Saving Tiny Hearts Society*. (\$100,000 USD 2011 – 2012).

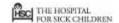
#### **HONOURS AND AWARDS**

Caldarone CA: Member, Board of Directors, Society of Thoracic Surgeons. 2011.

Van Arsdell GS: William G. Williams Teaching Excellence Award, Department of Surgery, University of Toronto. 2010 – 2011.







## **Division of General Surgery**

Dr. G. R. Azzie Associate Professor Dr. P.P.L. Chiu Assistant Professor Dr. S.H. Ein Associate Professor Dr. A.H. Fecteau Associate Professor Dr. J.T. Gerstle Associate Professor **Assistant Professor** Dr. S. Himidan Dr. J.C. Langer Professor (Division Head) Dr. P. Wales Associate Professor

#### **PUBLICATIONS**

Alfaraj MA, Ryan G, Langer JC, Windrim R, Seaward PGR, Kingdom J. Does gastric dilation predict adverse perinatal or surgical outcomes in fetuses with gastroschisis? Ultrasound in Obstetrics and Gynecology: 37:202-206, 2011.

**Azouz SM, Diamond IR, Fecteau A.** Graft Type in Pediatric Liver Transplantation. Current Opinion in Organ Transplantation: October 2011.

Beres A, Christison-LagayE, Romao RLP, Langer JC. Evaluation of surgisis for patch repair of abdominal wall defects in children. Journal of Pediatric Surgery: 47:917-919, 2012.

Bickler S, Ameh E, Azzie G. Surgical Care For Children. 2011.

Bolton-Maggs PHB, Langer JC, Iolascon A, Tittensor P, King M-J. Guidelines for the diagnosis and management of hereditary spherocytosis-2011 update. British Journal of Haematology: 156:37-49, 2012.

**Brindle ME**, **Flageole H**, **Wales PW**. Influence of Maternal Factors and Aboriginal Status on Health Outcomes in Gastroschisis: A Canadian Population Based Study. Neonatology: April 2012: 102 (1): 45-52.

Buesing KL, Tracy ET, Kiernan C, Pastor A, Cassidy L, Scott JP, Ware RE, Davidoff AM, Rescorla FJ, Langer JC, Rice HE, Oldham KT. Partial splenectomy for hereditary spherocytosis: a multi-institutional review. Journal of Pediatric Surgery: 46:178-183, 2011.

Christison-Lagay ER, Langer JC. Neonatal abdominal wall defects. Seminars in Fetal and Neonatal Medicine: Seminars in Fetal and Neonatal Medicine 16:164-172, 2011.

Christison-Lagay E, Forte V, Langer JC. Lymphatic malformations(cystic hygroma) Puri P (ed). Newborn Surgery, third edition Hodder Arnold, London UK, 739-748, 2011.

Diamond IR, de Silva NT, Tomlinson GA, Feldman BM, Moore AM, Ling SC, Wales PW. The Role of Parenteral Lipids in the Development of advanced Intestinal Failure Associated Liver Disease in Infants: A Multiple Variable Analysis. Journal of Parenteral and Enteral Nutrition: 2011 Sep: 35(5):596-602.

Diamond IR, Pencharz PB, Ling, SC, Feldman BM, Moore AM, Wales PW. Novel Lipid Management Strategies in Intestinal Failure Associated Liver Disease. Archives of Disease in Children: May 2012: 166 (5): 473-478.

**Diamond IR, Wales PW.** Parenteral Nutrition Associated Liver Disease. In: Clinical Management of Intestinal Failure (Duggan C, Jaksic T, eds). CRC/T&F. November 2011.

**Gerstle JT.** Thoracic Surgery: Surgical Considerations. Pediatric Anesthesia: Basic Peinciples-State of the Art-Future, Chapter 96, 2011.

Gupta A, Gerstle JT, Ng V, Wong A, Fecteau A, Malogolowkin M, Meyers R, Grant D, Grant R. Critical Review of Controversial Issues in the Management of Advanced Pediatric Liver Tumors. Pediatric Blood & Cancer: 2011 Jul 1: 56(7):1013-1018.

**Hsiao M**, **Langer JC**. Surgery for suspected rotation abnormality: selection of open vs laparoscopic surgery using a rational approach. Journal of Pediatric Surgery: 47:904-910, 2012.

Hsiao M, Langer JC. Value of laparoscopy in children with a suspected rotation abnormality on imaging. Journal of Pediatric Surgery: 46:13347-13352, September 2011.

Hua Z, Sergi C, Nation PN, Wizzard PR, Ball RO, Pencharz PB, Turner JM, Wales PW. Histologic and Ultrastructural Features of Intestinal Failure Associated Liver Disease in Neonatal Piglet Model of Short Bowel Syndrome. Journal of Election Microscopy: February 2012.



- Karsli C, El-Hout Y, Lorenzo AJ, Langer JC, Bagli DJ, Pippi Salle JL, Bissonette B, Farhat WA. Physiologic changes in transperitoneal versus retroperitoneal laparoscopy in children: a prospective analysis. Journal of Urology: 186 (4Suppl):11649-11652, 2011.
- Langer JC. Hirschsprung disease. Principles of Pediatric Surgery, 2nd edition, Springer, New York 2011, 475-84 Mattei P (ed).
- Langer JC. Hirschsprung disease. Pediatric Surgery, 7th edition, in Coran AG, Adzick NS, Krummel TM, Laberge J-M, Shamberger R (ed), Elsevier, Philadelphia 2012, 1265-78.
- Langer JC. Transanal pullthrough for Hirschsprung disease: Fisher J, Jones D (eds). Mastery of Surgery 8th edition, Lippencott, Williams and Wilkins, Philadelphia, 2012 1836-1839.
- Levin DN, Diamond IR, Langer JC. Complete vs partial fundoplication in children with esophageal atresia. Journal of Pediatric Surgery: 46:854-858, 2011.
- Mahant S, Pastor AC, DeOliveira L, Nicholas DB, Langer JC. Experiences and well-being following fundoplication and gastrojejunostome tube feeding in children with neurologic impairment. Pediatrics: 128:e395-403, 2011.
- Naito Y, Beres A, Lapidus-Krol E, Ratjen F, Langer JC. Does earlier lobectomy result in better long-term pulmonary function in children with congenital lung anomalies? A prosective study. Journal of Pediatric Surgery: 47:852-856, 2012.
- Nakayama DK, Langer JC. Single payer health insurance in pediatric surgery: US impressions and Canadian experience. Pediatric Surgery International: 27:329-334, 2011.
- **Nasr A, Langer JC.** Canadian Paediatric Surgery Network: Influence of location of delivery on outcome in neonates with congenital diaphragmatic hernia. Journal of Pediatric Surgery: 46:814-816, 2011.
- Oliveira C, de Silva NT, Wales PW. Five-Year Outcomes After Serial Tansverse Enteroplasty in Children with Short Bowel Syndrome. Journal of Pediatric Surgery: May 2012: 47 (5): 931-937.
- Oliveira C, Nasr A, Brindle ME, Wales PW. Ethanol Locks to Prevent Catheter-Related Bloodstream Infections in Pediatric Intestinal Failure: Systematic Review and Meta-Analysis. Pediatrics: February 2012: 129 (2): 318-329.
- Parida L, Morrisson GT, Shammas Am Hossain AKM, McCarville MB, Gerstle JT, Charron M, Rao B, Shulkin B. Role of lymphoscintigraphy and sentinel lymph node biopsy in the management of pediatric melanoma and sarcoma. Pediatric Surgery International: 28(6):571-578. June 2012.
- Patrus B, Nasr A, Langer JC, Gerstle JT. Intrasphincteric botulinum toxin decreases the rate of hospitalization for post-operative obstructive symptoms in children with Hirschsprung's disease. Journal of Pediatric Surgery: 46:184-87, 2011.
- Pichardo D, Luginbuehl IA, Shakur Y, Wales PW, El-Sohemy A, O'Connor DL. Effect of Nitrous Oxide Exposure During Surgery on the Homocysteine Concentrations of Children. Anesthesiology: May 2012.
- Rice HE, Crary SE, Langer JC, Kemper AR. Comparative effectiveness of different types of splenectomy for children with congenital hemoytic anemias. Journal of Pediatrics: 160:684-689, 2012.
- Romão RLP, Ozgediz D, de Silva N, Chiu P, Langer JC, Wales PW. Preserving bowel length with a transluminal stent in neonates with multiple intestinal anastomoses: a case series and review of the literature. Journal of Pediatric Surgery: 46:1368-1372, 2011.
- Safavi A, Synnes A, O'Brien K, Chiang M, Skarsgard E, Chiu PPL. Multi-institutional follow up of congenital diaphragmatic hernia (CDH) patients reveals severe disability and variations in practice. Journal of Pediatric Surgery: 47(5):836-841, 2012.
- Schrey S, Kelly EN, Langer JC, Davies GA, Windrim R, Seaward GR, Ryan G. Fetal thoraco-amniotic shunting for large macrocystic lung lesions. Ultrasound in Obstetrics and Gynecology: 39:515-520, 2012.
- Schuh S, Man C, Cheng A, Murphy A, Mohanta A, Moineddin R, Tomlinson G, Langer JC, Doria A. Predictors of non-diagnostic ultrasound in children with suspected appendicitis. Journal of Pediatrics: 158:123-29, 2011.
- Squires RH, Duggan C, Teitelbaum DH, Wales Pw, Balint J, Venick R, Rhee S, Sudan D, Mercer D, Martinez JA, Carter BA, Soden J, Horslen S, Rudolph JA, Kocoshis S, Superina R, Lawlor S, Haller T, Kurs-Lasky M, Belle SH. Pediatric Intestinal Failure Consortium. Natural History of Pediatric Intestinal Failure: Initial Report from the Pediatric Intestinal Failure Consortium. Journal of Pediatrics: May 2012.



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Suri M, Dicken B, Nation PN, Wizzard P, Turner JM, Wales PW. The Next STEP? Use of Tissue Fusion Technology to Perform the Serial Transverse Enteroplasty - Proof of Principle. Journal of Pediatric Surgery: May 2012: 47 (5): 938-943.

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Tang V, Daneman A, Navarro OM, Miller SF, Gerstle JT. Internal hernias in children: spectrum of clinical and imaging findings. Pediatric Radiology: 41(12):1559-1568, 2011.

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Turner D, Travis SPL, Griffiths AM, Ruemmele FM, Levine A, Benchimol EI, Dubinsky M, Alex G, Baldassano RN, Langer JC, Shamberger R, Hyams JS, Cucchiara S, Bousvaros A, Escher JC, Markowitz J, Wilson DC, van Assche G, Russell RK. Consensus guidelines for managing acute severe ulcerative colitis in children: a joint statement from ECCO, ESPGHAN, and the pediatric IBD Porto group. American Journal of Gastroenterology: 106:574-588, 2011.

van den Akker M, Angelini P, Taylor G, Chami R, Gerstle JT, Gupta A. Malignant pancreatic tumours in children: a single institution series. Journal of Pediatric Surgery: 47(4):681-687, 2012.

Zamakhshary M, Dutta S, To T, Stephens D, Langer JC, Wales PW. Seasonal variation of hypertrophic pyloric stenosis: a population based study. Pediatric Surgery International: 27:689-693, 2011.

Zamakhshary MF, Dutta S, To T, Stephens D, Langer JC, Wales PW. Seasonal Variation of Hypertrophic Pyloric Stenosis: A Population Based Study. Pediatric Surgery International: July 2011; 27 (7):689-693.

#### INVITED VISITS

Azzie GR: Alliance for Surgery and Anesthesia Presence (ASAP), San Diego, California, United States, 10 November 2011. (1) Presenter: Implementing a Contextually Appropriate Surgical Training Program: The Botswana Experience. (2) Invited Speaker: Education and Training. (3) Invited Speaker: Developing a Global Health Career.

Chiu PPL: American Academy of Pediatrics, Boston, Massachusetts, United States, 15 October 2011. Presenter: "Motility agents in duodenal atresia- do they work?" Presenter(s): R Dasgupta, A Goyal, C Oliveira, E Lapidus-Krol, PPL Chiu. Section on Surgery, Oct. 15-18, 2011, Boston, MA, USA. (Submitted). 2011 National Conference.

Gerstle JT: Canadian Association of Paediatric Surgeons, Ottawa, Ontario, Canada, 22 September 2011. Chair: CAPS 2011 Education Session. A session designed to show attendees the fundamental principles underlying EPIQ and it potential role in paediatric surgical care. Also to examine the current importance of EBM in paediatric surgery and how paediatric surgeons can increasingly utilize this approach to the care of their patients.

Gerstle JT: American Academy of Pediatrics, Boston, Massachusetts, United States, 14 October 2011. Invited Speaker: Minimally Invasive Approaches in Pediatric Surgical Oncology: When and How To. Presenter(s): Gerstle JT. Specifice topic: Tumor biopsy - Abdominal.

Gerstle JT: 8th Annual Paediatric Emergency Medicine Conference, Toronto, Ontario, Canada, 21 October 2011. Invited Speaker: Abdominal problems in children: When do I call the surgeon?

Gerstle JT: Tikur Anbessa Hospital, Addis Ababa, Ethiopia, 8 November 2011. Invited Lecturer: Minimal Access Surgery in Children: An Overview.

Gerstle JT: 12th Pan Arab Association of Pediatric Surgery Congress, Doha, Qatar, 18-19 February 2012. (1) Invited Lecturer: Neuroblastoma: Current and Future Treatment Options. (2) Invited Lecturer: Meet the Expert: Surgical Oncology.

Langer IC: Symposium at the Canadian Association of Pediatric Surgeons, Ottawa, Ontario, Canada, 24 September 2011. Invited Lecturer: Complicated cases of Hirschsprung's disease.

Langer JC: VIII Paulista Congress of Pediatric Surgery, Sao Paulo, Brazil, 12-14 October 2011. (1) Invited Lecturer: Esophageal "long gap" atresia: realistic options and management evaluation. (2) Invited Lecturer: Intestinal motility disorders: role of the surgeon. (3) Invited Lecturer: Primary surgical approach to anorectal malformation in infants. (4) Invited Lecturer: Gastroesophageal reflux in neurologically impaired children. (5) Invited Lecturer: Laparoscopy in the newborn: is it a reality? (6) Invited Lecturer: Fetal and neonatal tumours.



**Langer JC:** 8th Annual Paediatric Emergency Medicine Conference, Toronto, Ontario, Canada, 21 October 2011. Invited Lecturer: Neonatal abdominal surgical problems: when do I call a surgeon.

**Langer JC:** Canadian Bariatric Surgery Summit, Toronto, Ontario, Canada, 2 December 2011. Invited Lecturer: Role of bariatric surgery for adolescents: selection, assessment, porcedure of choice and results.

Langer JC: International Pediatric Endosurgical group, San Diego, California, United States, 9 March 2012. Invited Lecturer: Difficult situations in MIS.

**Langer JC:** Society for Pediatric Pathology, Vancouver, British Columbia, Canada, 17 March 2012. Invited Lecturer: Operative and post-operative management of Hirschsprungs disease: collaborative roles of the surgeon and pathologist.

Langer JC: Controversies in Pediatric Colorectal Surgery, Toronto, Ontario, Canada, 11 April 2012. (1) Panelist: Hirschsprung Disease Multi Country Webinar. (2) Panelist: Fecal Incontinence and Chronic Constipation Multi Country Webinar.

Langer JC: Canadian Paediatric Society 89th Annual Conference, London, Ontario, Canada, 8 June 2012. Invited Speaker: Bariatric surgery in children.

**Langer JC:** Canadian Association of Bariatric Physicians and Surgeons, Mississauga, Ontario, Canada, 9 June 2012. Invited Speaker: Pediatric Obesity Surgery: What is the Rationale?

**Langer JC:** Bristish Association of Paediatric of Surgeons/ European Pediatric Surgeon's Association Joint Trainee Symposium, Roma, Italy, 13 June 2012. Invited Lecturer: Innovation in Paediatric Surgery.

Wales P: International Small Bowel Transplant Symposium, DC, Washington, United States, September 2011. Senior Responsible Investigator: The Impact of Multidisciplinary Intestinal Rehabilitation Program and Transplant.

**Wales P:** The Division of Neonatology, Department of Pediatrics, University of Minnesota "Neonatal Nutrition: Assessment, Intervention & Management", Minneapolis, Minnesota, United States, 6 October 2011. Invited Lecturer: Short Bowel Syndrome: The Future is Bright.

**Wales P:** Women's and Children's Health Research Institute Research Day, University of Alberta, Edmonton, Alberta, Canada, 30 November 2011. Presenter: Role of Exogenous GLP-@ on Intestinal Adaptation in a Neonatal Porcine Model of Short Bowel Syndrome.

**Wales P:** Clinical Nutrition Week (A,S,P,E,N), Orlando, Florida, United States, January 2012. Invited Lecturer: Short Bowel Syndrome: The Future is Bright.

#### **RESEARCH AND INVESTIGATIONS**

Development of Highly Active Anti-Leukemia Stem Cell Therapy (HALT). Dick J, Wang J, Danska J, Guidos C, Hitzler J, Chiu P: CIRM-CSCC Team Grant. (\$2,100,615 2010 - 2014).

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Markers of Parenteral Nutrition (PN) Associated Metabolic Bone Disease in Children on Long-Term PN for Intestinal Failure. *Courtney-Martin G, Wales PW, Avitzur Y: Rare Disease Foundation.* (\$3,500 2011 - 2012).

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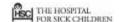
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#### **HONOURS RECEIVED**

Azzie GR: Herbie/Doctor of the Year, The Hospital for Sick Children. December 2011.

**Azzie GR:** Bruce Tovee Award, General Surgery, Dept of Surgery, Faculty of Medicine, The Hospital for Sick Children. Outstanding Contribution for Undergraduate Surgical Education. (Undergraduate Education). April 2012 – July 2012.

Wales P: Best Clinical Paper, Canadian Association of Paediatric Surgeons, Ottawa, Ontario, Canada. 43rd Annual Meeting. 2011.



## **Division of Neurosurgery**

Dr. M. Dennis Professor Dr. P.B. Dirks Professor

Dr. J.M. Drake Professor (Division Head)

Dr. A.V. Kulkarni Associate Professor

Dr. J.T. Rutka Professor

Dr. M.D. Taylor Associate Professor

#### **PUBLICATIONS**

Agostino A, Yeates, KO, Taylor HG, Bigler ED, Rubin KR, Vannatta K, Gerhardt CA, Stancin T, Dennis M. Understanding emotional expression and emotive communication in children with traumatic brain injury. Journal of the International Neuropsychological Society: 2012.

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**Venere M, Fine HA, Dirks PB, Rich JN.** Cancer stem cells in gliomas: identifying and understanding the apex cell in cancer's hierarchy. Glia: 2011 Aug; 59(8):1148-1154.

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Yang SH, Kulkarni AV. Successful treatment of tremor by endoscopic third ventriculostomy in an adolescent with obstructive hydrocephalus due to tectal glioma: case report. Childs Nerv Syst: 27(6), 2011.

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#### **INVITED VISITS**

**Dennis M:** American Psychological Association, 2011 Annual Convention, Washington, District of Columbia, United States, 6 August 2011. Invited Lecturer: Age, plasticity and the immature brain: Historical & Current ideas.

**Dennis M:** Second International Congress of Spina Bifida, Las Vegas, Nevada, United States, March 2012. Invited Lecturer: Attention: What have we learned from the SANDI Project?

**Dennis M:** Alberta Children's Hospital, Calgary, Alberta, Canada, May 2012. Invited Lecturer: Fatal Attraction: The Tangled Relationship of Neuropsychology and IQ Tests.

**Dennis M:** Behaviour and the Developing Brain Research Symposium, Calgary, Alberta, Canada, May 2012. Lecturer: Age and neural and behavioural plasticity.

**Dennis M:** International Federation of Spina Bifida, Stockholm, Sweden, June 2012. Lecturer: Gene, brain, and behaviour in spina bifida.

**Dirks PB:** RUNN Course, Woods Hole, Massachusetts, United States, 1 November 2011. Invited Lecturer: Probing the Relationship Between Stem Cells and Brain Cancer.

**Dirks PB:** Canadian Cancer Research Conference, Toronto, Canada, 29 November 2011. Invited Lecturer: Deveoping Theraputics for Brain Tumor Stem Cells.

**Dirks PB:** EMBO Molecular Medicine Conference, Heidelberg, Germany, 2 December 2011. Invited Lecturer: Defining the Properties of Brain Tumor Stem Cells.

**Dirks PB:** Asilomar, Niagara Falls, Ontario, Canada, 23 June 2012. Invited Lecturer: Basic Biology II: Stem Cells.

**Drake JM:** Centre for Brain and Behaviour, Toronto, Ontario, Canada, July 2011. Invited Lecturer: Surgical Management of Hydrocephalus.

**Drake JM:** Canadian Association of Neurophysiological Monitoring (CANM), Toronto, Ontario, Canada, September 2011. Invited Lecturer: Management of Lipomyelomeningocele.

**Drake JM:** CNS, Washington, United States, October 2011. Invited Lecturer: Masters of Endoscopy.

**Drake JM:** India International Society of Pediatric Neurosurgery, Goa, India, October 2011. Presenter: Sudden Rapid Deterioration Following Endoscopic Third Ventriculostomy - Further Insights.

Rutka JT: Second International Symposium on Brain Injury in Children, Toronto, Ontario, Canada, 12 July 2011. Speaker: Brain Tumors in Children.



Rutka JT: XXI Mexican Congress of Neurological Surgery, Acapulco, Mexico, 18-19 July 2011. (1) Invited Lecturer: Current Management of Pediatric Craniopharyngiomas. (2) Invited Lecturer: Current Management of Pineal Region Tumors. (3) Invited Lecturer: Current Management of Gliomas in Children.

Rutka JT: Sugita Memorial Forum, Niigata, Japan, 24 August 2011. Distinguished Speaker: Current Neurosurgical Topics.

Rutka JT: Juntendo University, Tokyo, Japan, 25 August 2011. Distinguished Speaker: Excellence in Clinical Neurosurgery.

Rutka JT: Nagoya University, Nagoya, Japan, 29 August 2011. Invited Lecturer: Advances in Neurosciences and Neurosurgery.

Rutka JT: Columbus, Ohio, United States, 8 September 2011. William E. Hunt Lecturer: Medulloblastoma: New Therapeutic Strategies.

**Rutka JT:** WFNS Interim Meeting and Congress of Continuous Education of the Brazilian Society of Neurosurgery, Recife, Brazil, 14 September 2011. Presenter: Chiari and Syringomyelia: How to Treat.

Rutka JT: Congress of Neurological Surgeons, Washington, District of Columbia, United States, 5 October 2011. Presenter: Current Strategies for Management of Pediatric Brain Tumors.

**Rutka JT:** Semmes-Murphey Clinic, Memphis, Tennessee, United States, 28 October 2011. Matthew Wood Lecturer: Neurosurgical Management of Craniopharyngioma in children: The Pendulum Keeps Swinging.

Rutka JT: B.r.a.i.n.child, Toronto, Ontario, Canada, 13 November 2011. Invited Speaker: Welcoming Remarks for Pediatric Brain Tumor Education Day.

Rutka JT: World Academy of Neurological Surgery, Taiwan, Province Of China, 30 November 2011. (1) Presenter: Advanced Neuromonitoring, Neuroimaging, and Neuronavigation in Epilepsy Surgery. (2) Invited Speaker: Medulloblastoma - Best Current and Future Management; Brainstem Tumors - Operative Management.

**Rutka JT:** Johns Hopkins University School of Medicine, Baltimore, Maryland, United States, 12 January 2012. (1) Walter Dandy Lecturer: Neurosurgical management of craniopharyngioma. (2) Walter Dandy Lecturer: Craniopharyngioma: The Pendulum keeps on swinging.

Rutka JT: Indiana University School of Medicine, Indianapolis, Indiana United States, 21 January 2012. Robert L. Campbell Lecturer: Craniopharyngioma: The Pendulum Keeps on Swinging.

Rutka JT: Neurosurgery Ontario, Toronto, Ontario, Canada, 29 February 2012. Invited Speaker: Emergency Department Expert Panel, Update and review focus on repatriation issues.

**Rutka JT:** 16th Annual Children's Neuroscience Symposium, Barrow Neurological Institute, Phoenix, Arizona, United States, 9 March 2012. Invited Speaker: Medulloblastoma: Towards personalized medicine.

**Rutka JT:** Barrow Neurological Institute, Phoenix, Arizona, United States, 9 March 2012. Sally Harrington Goldwater Visiting Professor: Neurosurgical management of craniopharyngioma: The pendulum keeps swinging.

**Rutka JT:** Cleveland Clinic, Cleveland, Ohio, United States, 13 March 2012. (1) Invited Speaker: Neurosurgical leadership: Lessons learned. (2) Invited Speaker: Craniopnaryngioma: The pendulum keeps on swinging.

**Rutka JT:** NeuroTouch Program, Mt. Sinai Medical School, New York, New York, United States, 4 April 2012. Invited Speaker: Simulating endoscopic third ventriculostomy: Practice makes perfect.

**Rutka JT:** 80th Annual American Association of Neurological Surgeons, Miami Beach, Florida, United States, 16 April 2012. Invited Speaker: Pediatric brain tumour: Towards personalized medicine.

Rutka JT: CCNSF, Ottawa, Ontario, Canada, 6 June 2012. Speaker: What's New and What you Need to Know About the Management of Paediatric Brain Tumours.

Rutka, James T: Jean Sirois Conference, Laval University, Quebec City, Quebec, Canada, 15 June 2012. (1) Invited Lecturer: The science and surgery of human brain tumors: Impact on patient outcomes. (2) Invited Lecturer: Neurosurgery leadership: Advancing the specialty and patient care.

**Taylor MD:** Canadian Bioinformatics Workshops, Bioinformatics for Cancer Genomics, Toronto, Ontario, Canada, 30 August 2011. Invited Lecturer: One of these things is not like the others: How genomics is revolutionizing clinical cancer diagnosis.



Taylor MD: Children's Oncology Group Biannual Meeting, Atlanta, Georgia, United States, 15 September 2011. (1) Invited Lecturer: Clinical Biomarker to Stratify Posterior Fossa Ependymoma. (2) Invited Lecturer: Nanostring based bioassay for rapid, reliable, and reproducible assignment of subgroup for clinical medulloblastoma specimens.

Taylor MD: The Canadian Cancer Research Conference, Toronto, Ontario, Canada, 30 November 2011. Invited Lecturer: One of these things is not like the others: How genomics is driving a revolution in personalized cancer diagnosis.

Taylor MD: Washington University in St Louis, St.Louis, Missouri, United States, 5 December 2011. Invited Lecturer: One of these things is not like the others: How genomics is driving a revolution in personalized cancer diagnosis. Neuro-Oncology Seminar Series.

Taylor MD: Medulloblastoma in the Mountains, Lake Tahoe, California, United States, 15 December 2011. Invited Lecturer: One of these things is not like the others: How genomics is driving a revolution in personalized cancer diagnosis.

Taylor MD: Scientific Advisory Board Meeting, Whistler, British Columbia, Canada, 31 January 2012. (1) Invited Lecturer: Aims and Objectives of the MAGIC project Stratifying and Targeting Medulloblastoma Through Genomics. (2) Invited Lecturer: Copy Number Variation Stratifying and Targeting Medulloblastoma Through Genomics. (3) Invited Lecturer: Nanostring Subgroup Identification Stratifying and Targeting Medulloblastoma Through Genomics.

Taylor MD: Pediatric Cancer Translational Genomics, Phoenix, Arizona, United States, 7 February 2012. Invited Lecturer: Inter and Intratumoral Heterogeneity Amongst the Medulloblastomas.

Taylor MD: American Association for Cancer Research 2012 Annual Meeting, Chicago, Illinois, United States, 2 April 2012. Invited Lecturer: Recent advances in the genomics and genetics of the medulloblastomas: The impact of intertumoral and intratumoral heterogeneity.

Taylor MD: Terry Fox Research Institute Annual Retreat, Victoria, British Columbia, Canada, 10 May 2012. Invited Lecturer: Challenges in International Collaborations.

Taylor MD: Shimane University School of Medicine, Izumo, Japan, 22 May 2012. Invited Lecturer: The Dawn of a New Era: Clinically Relevant Molecular Classification of Pediatric Brain Tumors.

Taylor MD: The 4th International Symposium of Brain Tumor Pathology, Nagoya, Japan, 24 May 2012. (1) Invited Lecturer: Genome Wide Expression Profiling and Pathology in Medulloblastoma. (2) Invited Lecturer: Molecualar Genetics of Medulloblastoma.

Taylor MD: European Society for Pediatric Neurosurgery Annual Course, Genoa, Italy, 5 June 2012. (1) Invited Lecturer: Hydrocephalus and Cysts. (2) Invited Lecturer: Shunt Malfunction. (3) Invited Lecturer: Histology and Genetics of Posterior Fossa Tumors. (4) Invited Lecturer: How I do it: ETV. (5) Invited Lecturer: Posterior Fossa Closure.

Taylor MD: The 19th International Brain Tumor Research and Therapy Conference, Niagara Falls, Ontario, Canada, 23 June 2012. Invited Lecturer: Identification of Copy Number Abnormalities in Group 3 Medulloblastoma Including a Highly Recurrent Translocation.

Taylor MD: The 15th International Symposium on Pediatric Neuro-Oncology, Toronto, Ontario, Canada, 25 June 2012. Distinguished Speaker: Current and Near Future Implications for Neurosurgical Practice of the Molecular Classification of Paediatric Brain Tumors.

#### RESEARCH AND INVESTIGATIONS

Addressing tumor heterogeneity through targeting of subgroup specific shared maintenance genes - the correct target for each cancer. Egan S, Woodgett J, Zacksenhaus E, Taylor MD: CIHR Team Grant - Terry Fox Frontiers Program. (\$3,032,612 2011 - 2014).

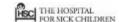
Anastomosis Tool Kit. Drake JM, Looi T: MaRS Innovation. (\$85,000 2012 - 2014).

Asymmetrical self renewal in normal and cancer stem cells of the human brain. Dirks PB: Canadian Institutes of Health Research (CIHR). (\$588,180 2008 - 2013).

Blockade of aberrant HGF/cMET signaling in medulloblastoma. Rutka J: Canadian Cancer Society Research Institute. (\$432,000 USD 2011 - 2014).

Cancer Stem Cell Initiative Funds for Lab. Taylor MD: Ontario Institute for Cancer Research (OICR). (\$263,290 2008 - 2011).

Cellular and Genetic Basis of Anaplastic Medulloblastoma. Taylor M, Weiss W, Wech-Reya R: National Institute of Health. (\$2,686,145 USD 2011 - 2016).



Centre for Computer-Assisted Intervention and Innovation (CCAII). Burns P, Babyn P, Bocking A, Cyril X, Kim P, Laberge J-M, Lymer J, Milgram P, Reznick R, Van Vaals J, Alman B, Amaral J, Bass J, Bratu I, Chait P, Drake J, Farhat W, Fitzgerald P, Giacomantonio M, Hedden D, Hynynen K, Jones S, Langer J, Newhook P, Ryan G, Sigalet D, Skarsgard E, Yazbeck S: Ontario Research Fund Research Excellence. (\$3,395,000 2008 - 2012).

Centre for the Investigation of Neuroplasticity in Developmental Disorders. *Snead C, Dennis M: Canada Foundation for Innovation (CFI).* (\$7,364,597 2007 - 2011).

Chemical Genomics of Brain Tumor Stem Cells. Rottape R, Dirks PB: OICR/Terry Fox Selective Therapeutics. (\$305,000 2009 - 2012).

Clinician Scientist Phase II Award (Renewal). Taylor M: Canadian Institutes of Health Research (CIHR). (\$150,000 2012 - 2013).

Co-operating Events and Drug Response in Sonic Hedgehog Driven Medulloblastoma. *Taylor MD: McLaughlin Center for Molecular Medicine.* (\$75,000 2011 - 2012).

Creation of a tractable preclinical model of metastatic medulloblastoma in zebrafish. *Taylor M, Scott I (Co-PI): B.R.A.I.N.child Operating Grant.* (\$25,000 2011).

CSF levels of L1CAM and amyloid precursor protein in post-hemorrhagic hydrocephalus of prematurity. Limbrick D, Inder T, Holtzman M, Leonard J, Kulkarni AV; Kestle JR; Riva-Cambrin J; Wellons JC, Park TS, Holukbov R; Whitehead WE: National Institutes of Health (NIH) (USA). (\$794,780 USD 2012 - 2017).

Defining cancer stem cell and clonal heterogeneity in mouse brain tumours. *Dirks PB: Canadian Cancer Society.* (\$548,000 2009 - 2013).

Development of a tool to measure school performance in children following traumatic brain injury. *Kulkarni AV. CIHR Research Fellowship.* (\$275,000 2010 - 2015).

Hydrocephalus Clinical Research Network. Kestle J, Drake J, Kulkarni A, Walker M, Riva-Cambrin J, Whitehead W, Wellons J, Oakes J: Schwab Charitable Fund (Pledged). (\$1,000,000 2007 - 2012).

Identification and Validation of the first Group D medulloblastoma oncogene. *Taylor M, Scott I (Co-PI): B.R.A.I.N.child Operating Grant.* (\$49,125 2011).

Medulloblastoma and Metastases. *Taylor M, Weiss B (UCSF). National Institutes of Health (NIH) (USA).* (\$2,815,548 USD 2011 - 2015).

Medulloblastoma Metastases Arise From the Cancer Stem Cell Compartment. *Taylor MD: Ontario Institute of Cancer Research Cancer Stem Cell Program.* (\$582,640 2012 - 2016).

Molecular targeting of the Rho-GTPase pathway in human astrocytomas. Rutka JT, Hynynen K, Mainprize T: Canadian Institutes of Health Research (CIHR). (\$797,005 2010 - 2015).

Nonconvulsive seizures among critically ill children: A prospective study of prevalence, patient characteristics and outcomes. *Hahn C, Hutchison JS, Snead OC, Parshuram CS, Dennis M: Physicians Services Incorporated Foundation (PSI).* (\$167,000 2009 - 2011).

OICR Genesis Project (Cancer Stem Cells). Dick J, Dirks PB: OICR. (\$750,000 2008 - 2013).

Role of Histone Lysine Methylation in Medulloblastoma and Cerebellar Development. *Taylor MD: Canadian Institutes of Health Research (CIHR).* (\$540,219 2010 - 2013).

Social outcomes in pediatric traumatic brain injury. Yeates KO, Taylor HG, Dennis M: National Institutes of Health (NIH) (USA). (\$993,833 USD 2005 - 2012).

Stratifying and Targeting Medulloblastoma Through Genomics. *Taylor MD: Genome Canada*. (\$9,856,814 2011 - 2014).

Targeting brain cancer with novel drug therapies. Rutka JT: B.R.A.I.N.child. (\$25,000 2010 - 2012).

The Canadian Pediatric Cancer Genome Consortium: Translating next-generation sequencing technologies into improved therapies for high-risk childhood cancer. *Poul S, Taylor MD: Genome Canada / Canadian Institutes of Health Research.* (\$2,820,000 2011 - 2012).

The Pediatric TBI CT Scan Tool. Guerguerian AM, Hutchison J, Parshuram C, Kulkarni AV, Laughlin S, Widjaja E, Willan AR. Ontario Neurotrauma Foundation (ONF). (\$99,975 2011 - 2012).

The Role of Aberrant HGF/cMET Signaling in Medulloblastoma. Rutha JT: Canadian Cancer Society Research Institute. (\$378,000 2008 - 2011).

The role of dysregulated HGF/c-Met pathway signalling in medulloblastoma dissemination. *Rutka J. Brain Tumour Foundation of Canada*. (\$24,766 2011 - 2012).

The Role of isochromosome 17q in medulloblastoma. Rutka JT, Dirks P, Taylor MD, Tabori U: Pediatric Brain Tumor Foundation. (\$1,198,800 2008 - 2011).



Translational Targeting of Group D Medulloblastoma. Rutka JT, Taylor MD: The Pediatric Brain Tumour Foundation. (\$1,000,000 USD 2012 - 2015).

Understanding the brain tumorigenic process: focus on cancer stem cells. *Dirks PB: National Cancer Institute of Canada (NCIC).* (\$564,000 2007 - 2011).

Vectors, epigenetics, and stem cell reprogramming. Ellis J, Manger D, Dillworth J, Lorincz M, Dirks PB: Canadian Institutes of Health Research (CIHR). (\$497,495 2008 - 2013).

White matter brain injury in children with hydrocephalus. Kulkarni AV, Mabbot D, Widjaja E, Donnelly R: PSI Foundation. (\$98,000 2008 - 2013).

#### **HONOURS RECEIVED**

Dennis M: Invited Lectureship, American Psychological Association. 2011.

Dennis M: Distinguished Women Scholar Lectureship, University of Victoria. 2011.

Dennis M: Distinguished Career Award, International Neuropsychology Society. 2012.

Rutka JT: Fellow, Royal Society of Canada, Canada. 2011.

Taylor MD: George-Armstrong Peters Prize, University of Toronto. 2011.



### Division of Orthopaedics

Dr. B.A. Alman
Dr. S. Hopyan
Dr. A. Howard
Dr. S. Kelley
Dr. M.L. Murnaghan
Dr. U. Narayanan
Dr. J.H. Wedge
Professor (Division Head)
Assistant Professor
Assistant Professor
Associate Professor
Professor

Dr. J.H. Wedge Professor
Dr. J.G. Wright Professor

Dr. R. Zeller Associate Professor

#### **PUBLICATIONS**

Al-Hussaini H, Hogg D, Blackstein ME, O'Sullivan B, Catton CN, Chung PW, Griffin AM, Hodgson D, Hopyan S, Kandel R, Ferguson PC, Wunder JS and Gupta AA. Clinical features, treatment, and outcome in 102 adult and pediatric patients with localized high-grade synovial sarcoma. Sarcoma: 2011: 231789. Epub 2011 Apr 14.

**Alman BA.** Desmoid tumors: Are they benign or malignant. In: Desmoid Tumors, (Litchman C, ed), Springer Science and Business Media, Part 3, Chapter 13, Stamford, Connecticut. 2012: 195-203.

Alman BA, Goldberg MJ. Syndromes of orthopaedic importance. In: Lovell and Winter's Pediatric Orthopaedics, 7th Edition, Chapter 9 (Flynn J, Weinstein S, eds). Lippincott, Williams and Wilkins, Philadelphia, PA. Sep 2011: 251-314.

Alman BA, Kelley SP, Nam D. Heal thyself: Using endogenous regeneration to repair bone. Tissue Engineering: Part B Rev. 2011: 17(6): 431-436.

Amini-Nik S, Glancy D, Boimer C, Whetstone H, Keller C, Alman BA. Pax7 Expressing cells contribute to dermal wound repair: Regulating scar size through a beta-catenin mediated process. Stem Cells: 2011: 29(9): 1371-1379.

Atesok KI, Alman BA, Schemitsch EH, Peyser A, Mankin H. Osteoid osteoma and osteoblastoma. Journal of the American Academy of Orthopaedic Surgeons: 2011: 19(11): 678-689.

Barnes J, Thomas S, Wedge J. Acetabular coverge following innominate osteotomy. J Bone Joint Surg Br Proceedings: 93-B:48-49 and 93-B:288.

Barnes J, Thomas S, Wedge JH. Acetabular coverage following innominate osteotomy. J Bone Joint Surg: 31(5): 530-533, 2011.

Bolllini G, Guillaume JM, Launay F, Zeller R, Jouve JL, Viehweger E, Katchburian M, Dubousset J. Progressive anterior vertebral bars: A study of 16 cases. Spine (Philia Pa 1976): 2011 Mar 15:36(6):E423-428.



Bonyun M, Camden A, Macarthur C, Howard AW. Helmet use in BIXI cyclists in Toronto, Canada: an observational study. BMJ Open: 2012 Jun 18;2(3):10.1136/bmjopen-2012-001049.

Borkhoff CM, Hawker GA, Wright JG. Patient gender affects the referral and recommendation for total joint arthroplasty. Clin Orthop Relat Res: 2011 469(7):1829-1837.

**Borkhoff CM**, **Hawker GA**, **Wright JG**. The Time Has Come to Address the Physicians' Contribution to Gender Inequities in Health Care. Institute of Gender and Health newsletter Intersection. Innovations in Gender, Sex and Health Research: Toronto, ON, November 22-23 2011. (Essay).

**Bouchard M, Kohler JC, Orbinski J, Howard A.** Corruption in the health care sector: A barrier to access of orthopaedic care and medical devices in Uganda. BMC International Health and Human Rights: 2012. doi:10.1186/1472-698X-12-5.

**Camden A, Buliung R, Rothman L, Macarthur C, Howard A.** The impact of pedestrian countdown signals on pedestrian-motor vehicle collisions: A quasi-experimental study. Injury Prevention: 2012 Feb 25.18:210-215.

Cashin MS, Kelley SP, Douziech JR, Verghese RA, Mulpuri K. Levels of Evidence in Pediatric Orthopaedic Journals. Where are we now? J Pediatr Orthop: 2011 Sep; 31(6):721-725.

Deckelbaum DL, Tardiff AG, Taylor R, Howard AW, Khwaja K, Kyamanywa P, Razek T. Global health conferences: Are they truly "global"? The Bethune Round Table paradigm for promoting global surgery. Canadian Journal of Surgery: December 2011; 54(6): 422–423.

**Dodwell E, Kelley SP.** Physeal Injuries: Basic science, assessment and acute management. Orthopaedics and Trauma: Oct 2011; 25(5): 377-392.

**Dufton MJ**, Wright J: Changes in Orthopaedic Management of Children with Spina Bifida Over the Past 20 Years. Current: The Magazine of the Spina Bifida and Hydrocephalus Association of Canada: May 2012.

Escott BG, Kelley SP. Management of Traumatic Physeal Growth Arrest. Orthopaedics and Trauma: June 2012; 26(3): 200-211.

Fattah A, Cypel T, Donner EJ, Wang F, Alman BA, Zuker RM. The first successful lower extremity transplantation: 6-year follow-up and implications for cortical plasticity. American Journal of Transplant: Dec 2011: 11(12): 2762-2767.

**Ferri-de-Barros F, Gibson J, Howard AW.** An argument for explicit rationing of health resources within the public-private mix in Brazil. Cadernos de Saúde Pública: June 2012. 28(6): 1211-1212.

**Fixler T, Menaker RJ, Blair GK, Wright JG.** Pediatric Surgical Capacity and Demand: Analysis Reveals a Modest Gap in Capacity and Additional Efficiency Opportunities. Healthcare Quarterly: 2011 Oct; 14 Spec No 3:28-334.

**Howard A, Alman BA.** Metabolic and endocrine abnormalities. In: Lovell and Winter's Pediatric Orthopaedics, 7th Edition, Chapter 7 (Flynn J, Weinstein S, eds). Lippincott, Williams and Wilkins, Philadelphia, PA. Sep 2011: 167-204.

Howard AW, Mulpuri K, Abel MF, Braun S, Bueche M, Epps H, Hosalkar H, Mehlman CT, Scherl S, Goldberg M, Turkelson CM, Wies JL, Boyer K. The Treatment of Pediatric Supracondylar Humerus Fractures. Journal of the American Academy of Orthopaedic Surgeons: 2012 May 1; 20(5):320-327.

Howard AW, Mulpuri K, Abel MF, Braun SV, Bueche MJ, Epps HR, Hosalkar HS, Mehlman C, Scherl S, Goldberg M, Turkelson C, Wies JL, Boyer K. The Treatment of Pediatric Supracondylar Humerus Fractures. Journal of the American Academy of Orthopaedic Surgeons: May 2012; 20:320-327.

Hsu SC, Zhang X, Yu C, Li ZJ, Wunder JS, Hui CC, Alman BA. Kif7 promotes Hedgehog signaling in growth plate chondrocytes by restricting the inhibitory function of Sufu. Development: July 2011: 138(17): 3791-3801.

**Jeannette P.P So, James G. Wright.** The Use of Three Strategies to Improve Quality of Care at a National Level. Clinical Orthopaedics and Related Research: 470(4):1006-1016, April, 2012.

**Kishore Mulpuri, Harish Hosalkar, Andrew Howard.** AAOS Clinical Practice Guideline: The Treatment of Pediatric Supracondylar Humerus Fractures. Journal of the American Academy of Orthopaedic Surgeons: May 2012. 20:328-330.

**Knight D, Alves C, Wedge JH.** Femoral varus derotation osteotomy for the treatment of habitual subluxation and dislocation of the pedicatric hip in Trisomy 21: A 10-year experience. J Ped Ortho: 31:638-643, 2011.



McAdam LC, Mayo AL, Alman BA, Biggar WD. The Canadian experience with long-term deflazacort treatment in Duchenne muscular dystrophy. Acta Myol: May 2012: 31(1): 16-20.

Moktassi A, Popkin C, White L, Murnaghan ML. Imaging of Osteochondritis Dissecans. Orthopaedic Clinics of North America: Volume 43, Number 2, April 2012. 201-212.

Mulpuri K, Kelley SP. Blount's Disease. Mercer's Textbook of Orthopaedics and Trauma. 10th Ed. Aprril, 2012. Chapter 67; 670-671.

Mulpuri K, Kelley SP. Developmental Coxa Vara. Mercer's Textbook of Orthopaedics and Trauma.10th Ed. April, 2012. Chapter 66; 651-652.

Nam D, Mau E, Wang Y, Wright D, Silkstone DC, Whetstone H, Whyne C, Alman BA. T-lymphocytes enable osteoblast maturation via IL-17F during the early phase of fracture repair. PLoS ONE: June 2012: 7(6): e40044.

Narayanan UG. Dexamethasone added to antibiotics improved clinical and laboratory outcomes in children with septic arthritis. J Bone Joint Surg Am: 2011 Nov 16;93(22):2124.

Narayanan UG. Hip surveillance for children with cerebral palsy: are the Australian standards the gold standard. J Pediatr Rehabil Med: March 2012; 4(3):235-236.

Narayanan, UG. To do or not to do the other hip? Dev Med Child Neurol: 2012 Mar; 54(3):201-202.

Narayanan UG, Weir S. The CPCHILD Manual. 2011.

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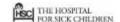
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#### **INVITED VISITS**

**Alman BA:** Canadian Orthopaedic Association, St. John's, Canada, 9 July 2011. A novel gene mediating metastasis in an in vitro osteosarcoma model. **Alman BA:** University of Rochester Medical Center - Center for Musculoskeletal Research, Rochester, New York, United States, 15 July 2011. Presenter: From development to pathology: Hedgehog signaling in cartilage neoplasia and osteoarthritis.

**Alman BA:** British Society for Matrix Biology, Newcastle, United Kingdom, 9 September 2011. Presenter: Hedgehog signaling and Gli target genes in osteoarthritis.

Alman BA: Arkanasas Childrens Hospital, James Aronson Distinguished Lectureship. Grand Rounds, Little Rock, Arkansas, United States, 20 September 2011. Guest Lecturer: Duchenne muscular dystrophy: Medical management in the absence of gene therapy.

**Alman BA:** University of Arkansas for Medical Sciences Grand Rounds, Little Rock, Arkansas, United States, 20 September 2011. Presenter: Making sense of syndromes.

Alman BA: National Cancer Institute, Second International Conference on Sarcoma Biology, Chicago, Illinois, United States, 25 October 2011. Presenter: Mesenchymal progenitor cells in desmoid tumor.

**Alman BA:** Connective Tissue Oncology Society, Chicago, Illinois, United States, 26 October 2011. Presenter: Identification of a novel marker for tumor initiating cells in human sarcomas.

Alman BA: Canadian Arthritis Network, Annual Meeting., Quebec City, Quebec, Canada, 28 October 2011. Aged bone repair.

**Alman BA:** First Annual Caribbean Congress on Skeletal Dysplasia, San Juan, Puerto Rico, 5 November 2011. (1) Presenter: Orthopaedic meets genetics. (2) Orthopaedic approach to skeletal dysplasia management.

**Alman BA:** Days of Molecular Medicine 2011 Conference: Re-engineering Regenerative Medicine, Hong Kong, 10 November 2011. Presenter: Beta-catenin in myeloid lineage cells is essential for cutaneous wound repair.

Alman BA: 2011 International Pediatric Orthopaedic Symposium (IPOS), Orlando, Florida, United States, 7 December 2011. Presenter: Caring for the syndromic child.

Alman BA: 2011 International Pediatric Orthopaedic Symposium (IPOS), Orlando, Florida, United States, 8 December 2011. Presenter: Bone lesions: From cysts to malignancies.

Alman BA: Molecular Control of Bone Remodeling Global Center of Excellence (GCOE), Tokyo Medical & Dental University, Tokyo, Japan, 25 January 2012. Presenter: Mesenchymal progenitors: Beta-catenin from neoplasia to repair.

**Alman BA:** Orthopaedic Research Society Annual Meeting, San Francisco, California, United States, 6 February 2012. T-lymphocytes in osteoblast maturation during early phases of fracture repair.

Alman BA: American Academy of Orthopaedic Surgeons Annual Meeting, San Francisco, California, United States, 9 February 2012. (1) Presenter: SAMD9L, a novel gene mediating the pathogenesis of osteosarcoma. (2) Presenter: Orthopaedic resident education 2012: It's a whole new game.

Alman BA: Western Orthopaedic Association, San Diego, California, United States, 12 April 2012. Invited Speaker: Teaching Orthopaedics Upside Down. Western Orthopaedic Association Dinner.

Alman BA: Pediatric Orthopaedic Training Program, Rady Children's Hospital, San Diego, California, United States, 12 – 13 April 2012. (1) David Sutherland Visiting Professorship: Bigger is Not Better: Obesity in Orthopaedics. (2) David Sutherland Visiting Professorship: Bad to the Bone: Metabolic and Genetic Bone Disease. (3) David Sutherland Visiting Professorship: From Fibromatosis to Fractures: Modulating Beta-Catenin as a New Therapeutic Approach. David Sutherland Visiting Professorship.

**Alman BA:** Mayo Clinic, Rochester, Minnesota, United States, 30 April 2012. (1) Visiting Professor: What is the evidence, the evidence is right. (2) Visiting Professor: Hedgehog signaling in cartilage: Chondrosarcoma and osteoarthritis.

**Alman**, **Benjamin A.:** University of Iowa, Iowa City, Iowa, United States, 8 June 2012. (1) VIP Visiting Discussant: Building Better Bones: Developmental Biology in Orthopaedics. (2) VIP Visiting Discussant: Duchene Muscular Dystrophy: A Case for Basic Science in Orthopaedics.

Alman BA: CSH-Asia Conference, Bone & Cartilage: From Development to Human Diseases, Suzhou, Jiangsu, China, 14 June 2012. Invited Speaker: Hedgehog Signaling in Cartilage Pathology.



Alman BA: Division of Orthopaedic Surgery, Department of Surgery, McMaster University, Hamilton, Ontario, Canada, 27 June 2012. Invited Speaker: Leadership in orthopaedics.

Howard A: The Ottawa Citizen, Ottawa, Canada, 1 March 2012. Invited Speaker: Traffic countdown signal not helping to reduce.

Kelley S: Canadian Orthopaedic Association Annual Meeting, St John's, Canada, July 2011. Invited Lecturer: (1) Update on the management of DDH. Paediatric Hip Symposium. (2) A case of Congenital Femoral Deficiency.

Kelley S: POSNA, Denver, Colorado, United States, 16 May 2012. Invited Lecturer: The Management of Hip Instability in Trisomy 21.

Murnaghan ML: Canadian Orthopaedic Association, St. John's, Canada, 8 July 2011. Invited Speaker: (1) Hip Arthroscopy in Pediatric Population. (2) Pseudo-dislocation of the Shoulder in Pediatric Patient. (3) Facilitator: Medical Education Research Paper Podium Presentations.

Murnaghan ML: Association for Medical Education Europe, Austria, August 2011. Presenter: Getting Up the Next Morning: Surgeons reactions to adverse events in the operating room.

Murnaghan ML: Rocky Mountain Hospital for Children, POSNA, AOSSM, Beaver Creek, Colorado, United States, 26 January 2012. Invited Speaker: Pediatric Sports Medicine and Trauma Symposium. Femoroacetabular. Impingement, Hip Avulsion Fractures, Intra-articular Knee Fractures

Murnaghan ML: University of California San Diego, San Diego, California, United States, 3 March 2012. Invited Speaker: Paediatric Sports Medicine Conference. Flat Feet and Torsional Deformities.

Murnaghan ML: Sports Medicine Interest Group - University of Toronto, Toronto, Ontario, Canada, 5 March 2012. Speaker: Pediatric and Adolescent Sports Medicine.

Murnaghan ML: Association for Surgical Education, San Diego, California, United States, 22 - 24 March 2012. (1) Facilitator: Research Paper Podium Presentations. (2) Presenter: Casting Simulation in Orthopaedics: Improving a Lost Art. (3) Presenter: Risk Taking in Surgery: The Dynamics of the Comfort Zone. (4) Presenter: Visual Imagery and Mental Rehearsal in Surgery.

Murnaghan ML: University of Pennsylvania, Philadelphia, Pennsylvania, United States, 13 April 2012. Invited Speaker: Cartilage Symposium. Arthroscopic Bone Grafting and Fixation of Unstable Osteochondritis Dissecans of the Knee.

Murnaghan ML: Pediatric Orthopaedic Society of North America - Annual Meeting, Denver, Colorado, United States, 18 May 2012. Presenter: Casting Simulation in Orthopaedics: Improving a Lost Art.

Murnaghan, Michael Lucas: Canadian Orthopaedic Association, Ottawa, Ontario, Canada, 8-9 June 2012. Speaker: (1) Instructional Course Lecture: Knee Injuries in the Growing Athlete. (2) Symposium: Staying Out of Trouble in Pediatric and Adolescent Athletic Injuries. (3) Facilitator: Medical Education Research Paper Podium Presentations. (4) Presenter: Casting Simulation in Orthopaedics: Improving a Lost Art.

Narayanan U: 37th Congreso Ecuatoriano de Ortopedia y Traumatologia, Salinas, Ecuador, 24 August 2011. Invited Lecturer: (1) Management Of Hip In Cerebral Pasy (2) Ankle Fractures In Children (3) Remodeling of Children's Fractures (4) Defining Malalignment (5) Prinicples of Elastic Stable Intramedullary Nailing (6) Update on Clubfeet.

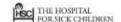
Narayanan U: Scoliosis Research Society, Louisville, Kentucky, United States, 15 September 2011. Principal Investigator: The CPCHILD® Questionnaire is Sensitive to Change Following Surgery for Scoliosis in Children with Cerebral Palsy.

Narayanan U: 65th Annual Meeting of the American Academy of Cerebral Palsy & Developmental Medicine, Las Vegas, Nevada, United States, 14-15 October 2011. (1) Presenter: Outcomes Assessment List (The GOAL): Developing a Meaningful Outcome Measure for Ambulatory Children with Cerebral Palsy. (2) Invited Speaker: Whose life is it anyway? Measuring meaningful outcomes for children with disabilities.

Narayanan U: 25th Pediatric Anaesthesia Conference, Toronto, Ontario, Canada, 5 November 2011. Invited Speaker: Cerebral Palsy: A view from the other side of the drapes.

Narayanan U: Ontario Association of Children's Rehabilitation Services 2011 Annual Conference, Toronto, Ontario, Canada, 7 November 2011. Invited Speaker: The Hip in Cerebral Palsy: Is there a role for Botulinum toxin Injections?

Narayanan U: Department of Pediatrics, University of Alberta, Edmonton, Alberta, Canada, 17 November 2011. Invited Lecturer: Whose life is it anyway? Measuring meaningful outcomes for children with disabilities.



Narayanan U: Department of Physical Medicine & Rehabilitation, Glenrose Rehabilitation Hospital, Edmonton, Alberta, Canada, 17 November 2011. Visiting Professor: The Hip in Cerebral Palsy (CP): The ins and outs of Hip Instability.

Narayanan U: Division of Pediatric Orthopaedic Surgery, University of Alberta Faculty of Medicine & Dentistry, Edmonton, Alberta, Canada, 18 November 2011. Visiting Professor: (1) Clinical trials in Pediatric Orthopaedics: The hype and the hope. (2) (Re) Defining Malunions: Why much of the fracture literature might be off the mark! (3) Malalignment of the Lower Extremity in Children: An update on Andry's legacy. 2011 Brian Greenhill Visiting Lecturer in Pediatric Orthopedic Surgery.

Narayanan U: Department of Orthopaedic Surgery, University of Alberta, Edmonton, Alberta, Canada, 18 November 2011. Visiting Professor: The Hip in Cerebral Palsy University of Alberta.

Narayanan U: Kluge Children's Rehabilitation Center, University of Virginia, Charlottesville, Virginia, United States, 2 December 2011. Visiting Professor: (1) The Hip In Cerebral Palsy: The ins and outs of hip instability. (2) Whose life is it anyway? Measuring meaningful outcomes for children with disabilities.

Narayanan U: 8th Annual International Pediatric Orthopaedic Symposium & American Academy of Orthopaedic Surgeons, Orlando, Florida, United States, 7 December 2011. Invited Lecturer: (1) Essentials of Pedatric Orthopaedics: Lower limb deformity & length inequality. (2) Essentials of Pediatric Orthopaedics: Neuromuscular disorders in children. (3) Management of neglected fractures and infections. (4) Making a difference: Quality of life outcomes for children with chronic disabilities.

Wedge JH: Balgrist University Hospital, Zurich, Switzerland, 24 November 2011. Invited Lecturer: (1) Hip Symposium-Orthopedics Update-Die Kinderhufte. Osteotomies for hip dysplasia from 18 months of age until skeletal maturity. (2) Hip Symposium-Orthopedics UpdateDie Kinderhufte. Current concepts and controversies in the management of Legg Perthes' disease.

Wedge JH: Paediatric Orthopaedic Society of North American and American Academy of Orthopaedic Surgeons, Orlando, Florida, United States, 7 December 2011. Invited Lecturer: 8th Annual International Paediatric Orthopaedic Symposium. (1) Dogma Buster: The Pavlik harness is the wrong device for infant DDH. (2) Obtaining and maintaining a closed reduction in a spica cast. (3) Case Discussion: Solving DDH before it needs an operation.

Wedge JH: Messe Frankfurt, Dubai, United Arab Emirates, 2 May 2012. Invited Lecturer: 1st Middle East & East Africa Paediatric Orthopaedic Surgery Conference. (1) Update hip ultrasound and early treatment of DDH: Spica cast and closed reduction. (2) Management of DDH after walking age until skeletal maturity. (3) Panel Discussion-Limitations of surgical treatment of hip dislocation: When should dislocated hips be left alone? (4) Panel Discussion: Management of Perthes in the child age 6 and above. (5) Open reduction techniques and osteotomies for DDH: Salter innominate osteotomy (indications, technique).

Wright JG: Prague, Czech Republic, 6 September 2011. Keynote Speaker: SICOT XXV Triennial World Congress. Evidence-Based Orthopaedics, What DoesThat Actually Mean?

Wright JG: Canadian Child and Youth Health Coalition, Ottawa, Ontario, Canada, 16 October 2011. Invited Speaker: Canadian Child and Youth Health Coalition Annual Symposium (CCYHC). Canadian Pediatric Surgical Wait Time Project: Lessons Learned.

Wright JG: Children's Hospital Boston, Boston, Massachusetts, United States, 31 October 2011. Invited Speaker: Risky Business: Great Expectations. Canadian Perspective on Health Care Delivery.

Wright JG: Deptartment of Surgery, British Columbia Children's Hospital, British Columbia, Canada, 2011. External Reviewer: External Reviews.

Wright JG: ORS Symposium, San Francisco, California, United States, 6 February 2012. Invited Speaker: (1) Taking promising innovation into clinical practice. What are the studies we should be doing? A framework for taking innovation into clinical practice. (2) Closing the loop: changing surgeons' minds when confronted with new information.

Wright JG: Western University, Canada, February 2012. External Reviewer: Lawson Research Institute. External Reviews.

Wright JG: British Society for Children's Orthopaedic Surgery, London, England, United Kingdom, 29 February 2012. Lecturer: The David Trevor Lecturer: (1) How do we measure the success of neuromuscular interventions? (2) The hip and the spine - in intervention 'worthwhile'? (3) The cavus foot. (4) The Canadian view point. (5) Ponseti and the syndromic foot. (6) Femoral shaft fractures: why I do what I do. (7) The David Trevor lecture: evidence based orthopaedics: beyond the tipping point. 8) The management of simple cysts. (9) Surgical dislocation: - the Canadian view.



Zeller R: Louisville, Kentucky, United States, 14 September 2011. Invited Speaker. Safety and outcomes in neuromuscular spinal deformity surgery.

**Zeller R:** The Children's Hospital of Philadelphia, Philadelphia, Pennsylvania, United States, 23 September 2011. Invited Speaker: Spinal Muscular Atrophy Scoliosis Workshop - 103 SMA scoliosis operated: Lessons learned.

Zeller R: Alberta Children's Hospital, Calgary, Alberta, Canada, 21 October 2011. Invited Speaker: (1) Treatment of spinal deformities in spinal muscular atrophy. (2) Bone based correction techniques in congenital and early onset scoliosis. (3) Surgical complications after adolescent idiopathic scoliosis surgery.

**Zeller R:** Park City, Utah, United States, 3 March 2012. Invited Lecturer: Spinal Deformities Meeting. Complications in Pediatric Spinal Deformity. Discussion of vascular complications.

#### **RESEARCH AND INVESTIGATIONS**

2011 Summer Internship Research Program in Injury Prevention. Howard A: Ontario Neurotrauma Foundation (ONF). (\$7,000 2011 - 2011).

A Prospective Study of Scoliosis in Children with Cerebral Palsy. Multiple Investigators of the HARMS Study Group, Narayanan U: Orthopaedic Research Education Foundation (Rosemont, IL), OREF Scientific Forum Grant/Spine Care. (\$40,000 USD 2011 - 2012).

An Evaluation of the Long Term Effectiveness of Botulinum Toxin in Children with Spastic Cerebral Palsy. Fehlings D, Narayanan UG, Rosenbaum P, Wright V, Goldsmith C: Canadian Institutes of Health Research (CIHR), Operating Grant. (\$425,956 2008 - 2012).

Articular chondrocyte differentiation and Osteoarthritis. *Alman B, Stanford WL, Keller GM: Canadian Institutes of Health Research (CIHR), Operating Grant.* (\$721,855 2010 - 2015).

Beta-catenin in aggressive fibromatosis. *Alman BA: National Cancer Institute of Canada (NCIC).* (\$681,140 2008 - 2013).

Bracing in adolescent idiopathic scoliosis (BrAIST). Wright JG, Clarke WR, Dolan L, Spratt K, Morcuende J, Weinstein S: Canadian Institutes of Health Research (CIHR). (\$4,337,863 2006 - 2011).

Can skin derived precursor cells regenerate limb bud defects in the chick embryo? *Hopyan S: Hospital for Sick Children, Perioperative Services Innovation Grant.* (\$50,000 2011).

Canadian Pediatric Surgical Wait Times Project-Stage II. Wright JG, Blair G, Corsten G, Farmer JP, Fitzgerald P, Hedden D, Houle AM, Jones S, Leclerc S, Leitch KK, Mayer SK, McPherson JA, Miller GG, Ouimet A, Price D, Willis B, Wong A, Wilson K: Health Canada. (\$9,800,000 2008 - 2011).

Cancer Stem Cell: Musculoskeletal tumour project leader and Clinical Outcomes Project Leader. Dick J (OICR - Cancer Stem Cell Program Head), Alman BA: Ontario Institute for Cancer Research (OICR). (\$759,000 2008 - 2012).

Casting SImulation in Orthopaedics: Improving a Lost Art. Murnaghan ML, Moktar J, Popkin C, Howard A, Murnaghan ML: The Hospital for Sick Children Peri-Operative Services Innovation Grant, The Hospital for Sick Children Peri-Operative Services Innov. (\$9,680 2011 - 2012).

Child pedestrian injury in the City of Toronto: The role of the built environment and active school transportation. *Rothman L, Howard A: CIHR, Doctoral Award-Frederick Banting and Charles Best Canada.* (\$105,000 2011 - 2014).

CIHR Team in Traffic and Road Injury Prevention (TRIP) Program for Canadian Children. Howard A, Ahmed S, Altenhof WJ, Angell GB, Birken CS, Bruce BS, Bussiere D, Charyk Stewert TM, Fraser D, Georgie VE, Gilliand JA, Girotti MJ, Hussein A, Kent RD, Kobti Z, Leitch KK: CIHR, Team Grant: Strategic Teams in Applied Injury Research - Ful. (\$200,000 2010 - 2015).

Functional Outcomes Following Orthopaedic Surgery Based On Gait Laboratory Versus Observational Gait Analysis In Ambulatory Children With Cerebral Palsy: A Multicentre Pilot Randomized Controlled Trial. Narayanan U, Willan AR, Wedge J, Fehlings DL, Redekop S, Zabjek K: Canadian Institutes of Health Research (CIHR), Randomized Clinical Trials. (\$314,633 2009 - 2013).

Hedgehog signaling in cartilage neoplasia and development. Wunder JS, Alman BA: Canadian Institutes of Health Research (CIHR). (\$807,945 2008 - 2013).

Improving education and coping of scoliosis patients undergoing surgery and their families using e-health. Wright J, Nicholas DB, Hetherington CR, Lupea D, Nyhof-Young JM: Canadian Institutes of Health Research (CIHR). (\$240,363 2006 - 2011).

Low Milk Intake, Vitamin D Deficiency and Fracture Risk in Young Children. Maguire J, Howard A, Adeli K, Sochett E, Parkin P, Birken C, Thorpe K: Dairy Farmers of Canada. (\$90,000 2010 - 2012).



Molecular mechanisms in fracture and wound healing. *Alman BA: Canadian Institutes of Health Research (CIHR).* (\$931,675 2008 - 2013).

Murine model of adynamic bone disease. *Grynpas M, Alman BA: Canadian Institutes of Health Research (CIHR).* (\$484,962 2009 - 2014).

Novel picosecond infrared laser for minimally invasive surgery. *Miller D, Alman BA: Natural Sciences and Engineering Research Council of Canada (NSERC).* (\$386,000 2009 - 2012).

Pedestrian Countdown Timers: Effect on Pedestrian Injury Rates. A controlled cohort study using spatial analysis in the city of Toronto. *Howard A, Buliung RN, MacArthur C, Rothman L, Willan AR: Canadian Institutes of Health Research (CIHR), Operating Grant - Secondary Analysis of Databases.* (\$70,720 2011 - 2013).

Pressures on surgeons to 'measure up' and their effects on surgical judgment. *Moulton CA*, *Murnaghan ML*, *Martimianakis MA*, *Kitto S: Physicians Services Incorporated Foundation (The) (PSI)*, *Physicians Services Incorporated Foundation*. (\$99,043 2011 - 2013).

Prophylactic treatment of dermal scarring. Alman B: MaRS Innovation, MaRS Innovation POP Funding Agreement. (\$45,000 2011 - 2012).

Safer Surgery Obstetrics and Surgery in Africa. Lett R, Braun L, Howard A: CIDA. (\$2,100,000 2010 - 2013).

Salter Harris Type I Fracture of the Distal Fibula: Clinical Suspicion versus Reality. *Boutis K, Babyn P, Plint A, Schuh S, Stimec J, Brison R, Stephens D, Narayanan U: Physicians' Services Incorporated (PSI) Foundation, PSI Foundation.* (\$170,000 2012 - 2014).

Specification of anterior proximodistal limb progenitors. *Hopyan S: March of Dimes Research Grant.* (\$338,606 USD 2010 - 2013).

The Embryological Basis of Congenital Femoral and Tibial Deficiency. Hopyan S: Pediatric Orthopaedic Society of North America (POSNA), OREF/POSNA research grant. (\$80,000 USD 2011 - 2013).

Traffic and Road Injury Prevention (TRIP) Program for Canadian Children. Snowdon A, Howard A: Canadian Institutes of Health Research (CIHR), Transportation Safety Research Program for Canadian. (\$1,600,000 2010 - 2015).

#### **HONOURS RECEIVED**

Narayanan U: Dr. John Whittaker Memorial Cerebral Palsy Award, Bloorview Research Institute, Toronto, Ontario, Canada. July 2011.

Wright JG: John Sharrard Memorial Medal, British Society Children's Orthopaedic Surgery. March 2012.



31 Gallie Day Gala Dinner: Mojgan Hodaie, Bernard Langer.



32 Gallie Day Gala Dinner: Albert Yee, Robin McLeod, Cari Whyne



## Division of Plastic and Reconstructive Surgery

Dr. G.H. Borschel **Assistant Professor** 

Dr. H.M. Clarke Professor

Dr. J.S. Fish Associate Professor Dr. D. Fisher Associate Professor Dr. C. Forrest Professor (Division Head)

Dr. T. Gordon Professor Dr. C.Y. Pang Professor

Dr. J. Phillips Associate Professor

Dr. R. Zuker Professor

#### **PUBLICATIONS**

Alhodaib NI, Clarke HM. Outcomes of treatment for neonatal brachial plexus palsy. Practical Management of Pediatric and Adult Brachial Plexus Palsies, (Chung KC, Yang LJ-S, McGillicuddy JE, eds.) Elsevier Saunders, Edinburgh, Scotland. 2012, 157-170.

Alsubhi FS, Althunyan AM, Curtis CG, Clarke HM. Radial nerve palsy in the newborn: A case series. CMAJ: 6 Sep 2011: 183(12): 1367-1370.

Bezuhly M, Fish J. Haemophilus Influenzae Serotype A As The Causative Aent of a Severe Pediatric Upper Extremity Infection. HAND: Volume 7, Issue 1 (18 Feb 2012), 94-97.

Bezuhly M, Fisher DM. Single stage repair of asymmetric bilateral cleft lip with contralateral lesser form defects. Plastic and Reconstructive Surgery: March 2012: 129(3), 751-757.

Bezuhly M, Klaiman P, Fisher DM. Impact of 22q deletion syndrome on speech outcomes following primary surgery for submucous cleft palate. Plastic and Reconstructive Surgery: March 2012: 129(3), 502e-510e.

Borschel GH, Kawamura DH, Kasukurthi R, Hunter DA, Zuker RM, Woo AS. The motor nerve to the masseter muscle: An anatomic and histomorphometric study to facilitate its use in facial reanimation. Journal of Plastic Reconstuctive Aesthetic Surgery: 2012 Mar; 65(3):363-366. Epub 2011 Oct 10.

Burge J, Saber NR, Looi T, French B, Usmani Z, Anooshiravani N, Kim P, Forrest C, Phillips JH. Application of CAD/CAM Prefabricated Age-Matched Templates in Cranio-Orbital Remodeling in Craniosynostosis. Journal of Craniofacial Surgery: Technical Strategy. Volume 22, Number 5, 1810-1813. Sep 2011.

Clarke HM, de Chalain TMB. Burns and post-burn care: Surgical considerations. Pediatric Anesthesia. Basic Principles-State of the Art-Future, (Bissonnette B, Anderson BJ, Bosenberg A, Engelhardt T, Mason LJ, Tobias JD eds]. People's Medical Publishing House-USA, Shelton, Connecticut 2011: 2031-2048.

Cypel TKS, Mrad A, Somers G, Zuker RM. Ganglion Cyst in Children: Reviewing treatment and recurrence rates. Can J Plast Surg: 2011; 19(2): 53-55.

Farhangkhoee H, Cross KM, Koljonen V, Ghazarian D, Fish JS. Evaluation of Ki-67 as a Histological Index of Burn Damage in a Swine Model. Journal of Burn Care & Research: 33 (2); e55-e62, March/April 2012.

Fattah A, Borschel GH, Manktelow RT, Bezuhly M, Zuker RM. Facial palsy and reconstruction. Plast Reconstr Surg: Plast Reconstr Surg 2012 Feb;129(2):340e-52e.

Fattah A, Curtis CG, Agur AMR, Clarke HM. Functional contribution of T1 to the brachial plexus in infants. European Journal of Hand Surgery: March 2012: 37E (3): 237-243.

Fattah A, Ravichandiran K, Zuker R, Agur A. Creation of a 3D Digital Model of the Gracilis Muscle: Application to Free Functioning Muscle Transfer. Canadian Journal of Plastic Surgery: 9 June 2012; 20(2): 135.

Fish JS, Theman K, Gomez M. Diagnosis of Long-Term Sequelae Following Low Voltage Electrical Injury. Journal of Burn Care & Research: 33(2); 199-205, March/April 2012.

Fisher DM. Plastic procedures: surgical considerations.: In: Pediatric Anesthesia - Basic Principles - State of the Art - Future, (Bissonnette B, Anderson BJ, Bosenberg A, Engelhardt T, Mason LJ, Tobia JD, eds). People's Medical Publishing House-USA, Shelton, CT, USA, Oct 2011: 1722-1727.

Fisher DM, Sommerlad BC. Cleft lip, cleft palate and velopharyngeal insufficiency: Plastic and Reconstructive Surgery 2011: 128(4): 342e-360e.



- Hayes JA, Forrest CR, Walsh W, Petroz GC, Adeli K, Bissonnette B. Continuous bupivacaine infusion post-iliac crest bone graft harvesting in pediatric cleft surgery: Role and comparison with ketoralac. Cleft Palate Craniofacial Journal: 48 (5): 532 - 537, Sep 2011.
- Huang N, Ashrafpour H, Levine RH, Forrest CR, Neligan PC, Lipa JE, Pang CY. Vasorelaxation effect and mechanism of action of vascular endothelial growth factor-165 in isolated perfused human skin flaps. Journal of Surgical Research: 1 January 2012: 172(1), 177 - 186.
- Jung JJ, Woo AS, Borschel GH. The Use of Integra in Apert Syndactyly: A Case Study and Review of the Literature. Journal of Plastic, Reconstructive and Aesthetic Surgery: 2012 Jan; 65(1):118-121. Epub 2011 Jul 19.
- Khechoyan D, Forrest CR. Reconstruction of complex pediatric cranial vault deformities with CAD/CAM alloplastic implant technology. Canadian Journal of Plastic Surgery: 20 (2): 129, June
- Klassen A, Goodacre T, Wong K, Pusic A, Cano S, Johnson J, Lawson J, Syed I, Kainth S, Dua M, Forrest CR. Developing a patient-reported outcome measure for cleft-lip and/or palate patients. Proc ISOQOL 18th Annual Conference Abstract Supplement: 34 - 35, 1 October 2011.
- Klassen AF, Tsangaris E, Forrest CR, Wong KW, Pusic AL, Cano SJ, Syed I, Dua M, Kainth S, Johnson J, Goodacre T. Quality of life of children treated for cleft lip and/or palate: A systematic review. Journal of Plastic Reconstructive Aesthtic Surgery: May 2012, 65 (5) 547 - 557.
- La Scala GC, O'Donovan DA, Yeung I, Leong I, Mendes M, Rogers M, Neligan PC, Pang CY, Forrest CR. Local hemodynamic effects of radiation on the rabbit orbitozygomatic complex with and without cytoprotection. Plastic Reconstructive Surgery: March 2012, 129 (3): 599-608.
- Moore AM, Borschel GH, Santosa KA, Flagg ER, Tong AY, Kasukurthi R, Newton P, Yan Y, Hunter DA, Johnson PJ, Mackinnon SE. A Transgenic Rat Expressing Green Fluorescent Protein (GFP) in Peripheral Nerves Provides a New Hindlimb Model for the Study of Nerve Injury and Regeneration. Journal of Neuroscience Methods: 2012 Feb 15; 204(1):19-27.
- Neinstein RM, Phillips JH, Forrest CR. Pediatric orbital floor trapdoor fractures: Outcomes and CT-based morphologic assessment of the inferior rectus muscle. Journal of Plastic, Reconstructive & Aesthetic Surgery: February 2, 2012; 63; 869 - 874.
- O'Donovan DA, La Scala GC, Leong I, Mendes M, Rogers M, pritzker KH, Yeung 1, Pang CY, Neligan PC, Forrest CR. Radiation-induced craniofacial bone growth inhibition: Acute and long-term effects on bone histopathology with and without cytoprotection. Plastic Reconstructive Surgery: April 2012 129 (4): 636e - 645 e.
- Peters DA, Forrest CR. Craniofacial malformations: Surgical considerations in Pediatric Anesthesia: Basic Principles - State of the Art - Future. Bruno Bissonnette (Ed) People's Medical Publishing House - USA. November 2011: Sheldon, CT. 1891-1919.
- Sinno H, Thibaudeau S, Izadpanah A, Tahiri Y, Christodoulou G, Zuker RM, Iin J. Utility Scores For Facial Paralysis Requiring Facial Reanimation. NESPS Abstract Book: Abstract No 58: 188. 22 Oct 2011.
- Snyder-Warwick A, Zive L, Halliday W, Borschel G, Zuker RM. Axonal Counts in Free Muscle Transfer for Facial Paralysis. 2011 Chang Gung Mayo Clinic Symposium in Reconstructive Surgery: 119. Oct 2011.
- Snyder-Warwick A, Zive L, Fattah A, Halliday W, Borschel G, Zuker R. Axonal Counts in Facial Animation. Canadian Journal of Plastic Surgery: 6 June 2012; 20(2): 141-142.
- Suri S, Disthaporn S, Atenafu E, Fisher DM. Presurgical presentation of columellar features, nostril anatomy, and alveolar alignment in bilateral cleft lip and palate after infant orthopedics with and without nasoalveolar molding. The Cleft Palate-Craniofacial Journal: May 2012: 49(3); 314-324.
- Wong K, Goodacre T, Forrest CR, Pusic A, Cano S, Klassen A. Developing a patient-reported outcome measure for cleft lip and/or palate (Cleft-Q): A conceptual framework. Canadian Journal of Plastic Surgery: 20 (2): 133, June 2012.
- Zuker RM, Bezuhly M, Manktelow, RT. Selective Fascicular Coaptation of Free Functioning Gracilis Transfer for Restoration of Independent Thumb and Finger Flexion following Volkmann's Ischemic Contracture. Journal of Reconstructive Microsurgery: 2011 Sep; 27(7):439-444.
- Zuker RM. Lower Extremity Transplantation in Children. 2011 Chang Gung Mayo Clinic Symposium in Reconstructive Surgery: 104. Oct 2011.
- Zuker RM. Microsurgery in Children. 2011 Chang Gung Mayo Clinic Symposium in Reconstructive Surgery: 29. Oct 2011.



Zuker RM. Sarcomas in Children and the Role of Free Tissue Transfer for Cover and Function. 2011 Chang Gung Mayo Clinic Symposium in Reconstructive Surgery: 97. Oct 2011.

Zuker RM. Velopharyngeal Insufficiency and Avoiding Complications in Pharyngeal Flap Surgery. 2011 Chang Gung Mayo Clinic Symposium in Reconstructive Surgery: 25. Oct 2011.

Zuker RM, Zenn MR. Gracilis and TUG/TMG Flaps. Reconstructive Surgery: 2012; 12C:1419-

#### **INVITED VISITS**

Borschel GH: 3rd European Plastic Surgery Research Council Meeting Thursday, 25 - 28 August 2011 at Ship MS Cap San Diego, Hamburg, Hamburg Free State, Germany, 25 August 2011. Invited Speaker: New Developments in Peripheral Nerve Regeneration Research.

Borschel GH: American College of Surgeons 97th Annual Clinical Congress, San Francisco, California, United States, 24 October 2011. Invited Speaker: (1) Controlled Release of Glial Cell Derived Neurotrophic Factor Enhances Nerve Regeneration. (2) Controlled Release of Glial Cell Derived Neurotrophic Factor Enhances Nerve Regeneration.

Borschel GH: Instructional Course for Facial Paralysis Reconstruction / Dr. David Chwei-Chin Chuang, Taipei, Taiwan, Province Of China, 25 October 2011. (1) Course Faculty: Update on Peripheral Nerve Regeneration Basic Research and Clinical Application. (2) Moderator: Muscle Transplantation for Facial Paralysis Reconstruction - Four Keys to Success.

Borschel GH: Euopean Association of Plastic Surgeons Research Council, Munich, Munich, Germany, 24 May 2012. In-vivo imagining of facial nerve regeneration after crush injury, cut-andrepair and cross-face nerve grafting in the Thy1-GFP rat.

Clarke H: Children's Hospital of Pittsburgh, Pediatric Surgery Grand Rounds, Pittsburgh, Pennsylvania, United States, 4 October 2011. The management of obstetrical brachial plexus palsy.

Clarke H: University of Pittsburgh Medical Center, Plastic Surgery Grand Rounds, Division of Plastic and Reconstructive Surgery, Pittsburgh, Pennsylvania, United States, 5 October 2011. The management of obstetrical brachial plexus palsy.

Clarke H: American Society for Peripheral Nerve, Las Vegas, Nevada, United States, 13 January 2012. Controversies in brachial plexus surgery.

Clarke H: Mayo Clinic Skills Laboratory. Advances in Brachial Plexus Reconstruction: A Surgical Skills Course, Rochester, Minnesota, United States, 20 April 2012. (1) To operate or not to operate (Obstetrical) (2) Planning surgery (Obstetrical) (3) Cable graft fabrication with fibrin glue (4) Stump the professor.

Fish JS: Safe Kids Canada, Toronto, Ontario, Canada, 4 October 2011. Speaker: Family Fire Safety Demos.

Fish JS: Eastern Great Lakes Burn Study Group, Canonsburg, Pennsylvania, United States, 7 October 2011. Presenter: Assessing the use of Neurological Measurements as Diagnostic Tool for Fatigue Experienced by Electrical-injury Patients.

Fish JS: Canadian Special Interest Group - American Burn Association, Seattle, Washington, United States, April 2012. Presenter: The Impact of Time on Neuropsychological Functioning in Electrical Injury: Preliminary Results From a Longitudinal Study.

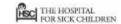
Fisher D: University of Alberta, Edmonton, Alberta, Canada, 16 February 2012. Invited Speaker: Cleft lip and palate.

Fisher D: 5th International Congress on Auricular Reconstruction, Sydney, Australia, 12 March 2012. Invited Speaker: Modification of the Nagata 3D framework.

Fisher D: 36th Annual Meeting of Japanese Cleft Palate Association, Kyoto, Japan, 24 May 2012. Invited Speaker: Unilateral cleft lip repair - an anatomic subunit approximation technique. May 23-25, 2012.

Fisher D: Okinawa Nanbu Medical Center/Children's Medical Center, Okinawa, Japan, 26-28 May 2012. Visiting Professor: (1) Unilateral cleft lip repair - an anatomic subunit approximation technique. (2) Grand Rounds - Paediatric plastic surgery. (3) Workshop - Unilateral and bilateral cleft lip repair.

Forrest C: 2011 Cleft & Cranio-Maxillofacial Anomalies Conference V, The Royal Children's Hospital, Melbourne, Australia, 21-22 October 2011. Invited Speaker: (1) Overview of nonsyndromic craniosynostosis. (2) Overview of syndromic craniosynostosis. (3) Skull reconstruction and approach of bony defects and contour anomalies including the use of Alloplasts. (4) Hypertelorism and orbital dystopia. (5) Deformational Plagiocephaly.



Forrest C: 20th Annual New Developments in Prenatal Diagnosis and Medical Genetics Symposium, Toronto, Ontario, Canada, 16 May 2012. Invited Speaker: Surgery in syndromic craniosynostosis.

Forrest C: Mayo Clinic Chang Gung University Symposium in Reconstructive Surgery, Rochester, Minnesota, United States, 1 June 2012. Invited Speaker: (1) Advances in Craniofacial Surgery. (2) Total Cranial Vault Reshaping for Sagittal Synostosis.

Phillips J: Continuing Medical Education Outfitters, Baltimore, Maryland, United States, 13 April 2012. Presenter: Advanced orbital Surgery Symposium: A Tribute to Paul Tessier. 1) Managment of Congenital Hypertelorism 2) The Use of CAD/CAM technology in Pediatric Craniofacial Surgery.

Phillips J: Computer Assisted Radiology and Surgery, Pisa, Italy, 30 June 2012. Presenter: The Use of Prefabricated Templates in Cranial Vault Remodelling.

Zuker R: Facial Paralysis Symposium, Oespidale Generale de Parma, Departmento Maxillofaciale, Parma, Italy, 23 August 2011. Invited Lecturer: Facial Paralysis in Children Current Techniques.

Zuker R: Upper Extremity Sarcoma Update, Current Concepts & Reconstructive Options, Oespedaliero-Universitaria Careggi, Centro Traumatologico Toscana, Florence, Italy, 29 August 2011. Invited Speaker: Childhood Soft Tissue Sarcomas and the Role of Free Tissue Transfer for Cover and Function.

Zuker R: 2011 Instructional Course of Facial Palsy Reconstruction, Taipei, Taiwan, Province Of China, 25 October 2011. (1) Honorary Chairman of the Meeting. (2) Invited Lecturer: Facial Paralysis Reconstruction: How I Do It.

Zuker, Ronald: 2011 Chang Gung Mayo Clinic Symposium in Reconstructive Surgery, Taipei, Taiwan, China, 29 October 2011. (1) Chair: 2011 Instructional Course of Facial Palsy Reconstruction. (2) Invited Lecturer: Reconstructive microsurgery in pediatric patients. (3) Invited Lecturer: Management of velopharyngeal insufficiency and avoiding complication in pharyngeal flap surgery. (4) Invited Lecturer: Microsurgical reconstruction for the upper extremity sarcoma. (5) Invited Lecturer: Lower Extremity Transplantation in Children.

Zuker R: Royal Australasian College of Surgeons, Brisbane, Australia, 22 December 2011. Invited Speaker: Facial Reanimation.

Zuker R: American Society for Reconstructive Microsurgery, Annual Meeting, Las Vegas, Nevada, United States, 17 January 2012. Panel Member: Facial Reanimation.

Zuker R: St. James School of Medicine, Department of Embryology, Anguilla, BWI, 14-21 February 2012. (1) Invited Lecturer: Conjoined Twins - Embryology, Clinical Features and Surgical Separation. Common Embryological Events and the Reconstructive Surgeon. (2) Visiting Professor: Cleft Lip and Palate - Embryology, Etiology, Clinical Manifestations and Multidisciplinary Management.

Zuker R: The Hughes Medical Centre, Anguilla, BWI, 20 February 2012. Invited Lecturer: Cleft Lip and Palate - Embryology, Clinical Features and Surgical Management.

Zuker R: Harvard University Plastic Surgery Grand Rounds, Boston, Massachusetts, United States, 18 April 2012. Invited Lecturer: (1) Keys to Success in Facial Reanimation Surgery. (2) Lower Extremity Transplantation in Children.

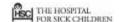
Zuker R: Guwahati Comprehensive Cleft Care Centre, Guwahati, Assam, India, 4 May 2012. Invited Lecturer: (1) The Cleft Lip and Palate Program at The Hospital for Sick Children. (2) The Fisher Lip Repair - Pros and Cons.

Zuker R: Canadian Society of Plastic Surgeons Sixty Sixth Annual Meeting, Toronto, Ontario, Canada, 6 June 2012. Invited Speaker: Canadian Initiatives in Composite Tissue Allotransplantation.

Zuker R: National Capital Plastic Surgeon's Meeting, Ottawa, Ontario, Canada, 19 June 2012. Invited Lecturer: India and The Guwahati Comprehensive Cleft Care Center.

Zuker, Ronald: Resident Seminar, Ottawa Civic Hospital, Ottawa, Ontario, Canada, 19 June 2012. Invited Lecturer: (1) Embryological Events and Reconstructive Surgery. (2) Congenital Melanocytic Nevi: Controversies and Surgical Management.

Zuker, Ronald: Children's Hospital of Eastern Ontario (CHEO), Ottawa, Ontario, Canada, 20 June 2012. (1) The Stanley Mercer Visiting Professorship Annual Lecturer: Conjoined Twins. (2) Invited Speaker: Facial Paralysis Reconstruction. (3) Invited Speaker: Tumor Reconstruction.



#### **RESEARCH AND INVESTIGATION**

An Optical Imaging Device for a Rapid Assessment of Tissue Viability and Wound Healing. *Sowa M, Fish JS: Centre for Security Science CRTI, Centre for Security Science CRTI.* (\$180,000 2007 - present).

Application of side-to-side nerve grafting to support regeneration in facial paralysis. Borschel GH, Manfred F, Gordon T: Österreichisch Fonds zur Förderung der wissenschaftlichen Forschung [The Austrian Science Fund (FWF)]. (\$45,000 EUR 2011 - 2012).

Cleft Q: Development of a patient reported outcome measure for cleft lip and/or palate. Forrest C: PSI. (\$19,000 2010 - 2011).

CLEFT-Q: Development of a patient-reported outcome (PRO) measure for cleft lip and/or palate (CLP). Wong K, Klassen A, Forrest C: Canadian Society of Plastic Surgeons Outcome Research Grant. (\$10,000 2012 - 2013).

Educational Exchange Programme for Cleft Lip and Palate Repair. West Bengal and Assam, India. *Zuker R: Donner Foundation.* (\$230,000 2011 - 2014).

IAMGold Fellowship in Peripheral Nerve Regeneration Research. Borschel GH, Gordon T: IAMGold, Inc. (\$80,000 2011 - 2013).

Improving functional recovery after peripheral nerve injury. Borschel G, Gordon T: CIHR, Operating Grant. (\$290,996 2011 - 2014).

Infrastructure Operating Funds (IOF); Nerve Research Centre at the Hospital for Sick Children in Toronto. Borschel G, Gordon T: Canada Foundation for Innovation (New Opportunities Fund), Infrastructure Operating Funds (IOF). (\$47,574 2011 - 2012).

Nerve Research Centre at the Hospital for Sick Children in Toronto. *Borschel G, Gordon T: Canada Foundation for Innovation, Leaders Opportunity Fund.* (\$549,322 2011 - 2012).

Side-to-side nerve grafting to enhance nerve regeneration. Borschel GH, Gordon T: Plastic Surgery Foundation, National Endowment for Plastic Surgery. (\$50,000 USD 2011 - 2012).

The Use of Prefabricated Templates in Cranial Vault Remodeling. *Phillips J, Saber N, Forrest C: Hospital for Sick Children, Innovation Grant.* (\$10,000 2011 - 2013).

#### **HONOURS RECEIVED**

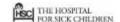
Phillips J: Best Clinical Science Research Presentation, The Hospital for Sick Children, Toronto, Ontario, Canada. April 2012.

**Zuker R:** Fu Chan Wei Award for Reconstructive Surgery. Chang Gung Mayo Clinic, Taipei, Taiwan. October 2011.

Zuker R: Best Paper Award, 2011 Chang Gung Mayo Clinic Symposium in Reconstructive Surgery. October 2011.

Zuker R: Best Research Paper, GAM Canada, Toronto, Ontario, Canada. 2012.





# Division of Urology

Dr. D.J. Bagli Professor

Dr. W.A. Farhat Associate Professor

Dr. M.A. Koyle Professor

Dr. A.J. Lorenzo Assistant Professor
Dr. J.L. Pippi-Salle Professor (Division Head)

#### **PUBLICATIONS**

Alexander A, Khoury AE, Lorenzo AJ. Urological Issues in Pediatric Dialysis. Pediatric Dialysis: Springer Science + Business Media, LLC, 2012.

Alexander A, Weber B, Lorenzo AJ, Keays M, El-Ghazaly T, Bagli DJ, Pippi Salle JL, Irwin M, Farhat WA. Hydronephrosis in children with abdominal and pelvic neoplasms: outcome and survival analysis of a single center pediatric oncology series. Journal of Urology: 186 (4 Suppl): 1705-1709: October 2011.

**Braga LH**, **Pemberton J**, **Demaria J**, **Lorenzo AJ**. Methodological concerns and quality appraisal of contemporary systematic reviews and meta-analyses in pediatric urology. Journal of Urology: Jul; 186(1): 266-271, 2011.

Braga LH, Whelan K, Demaria J, Pippi-Salle JL. Newborn With Persistent Cloaca Presenting With Accessory Phallic Urethra and Ambiguous Genitalia. Journal of Urology: 78(3):680-683, Sep 2011.

Costa EC, Ferreira CT, Pippi Salle JL, Fraga JC. Diagnosis and management of congenital rectourethral fistula in a child with long tubular duplication of the colon and Klippel-Feil syndrome. Journal of Pediatric Surgery: 46, 2184-2186, 2011.

Farhat WA. Pediatric Laparoendoscopic Single-Site (Less) Surgery: Are we there yet? Urology: Vol. 186, Issue 3: 1052, 2011.

**Farhat, WA.** Editorial Comment: Bladder Regeneration: great potential but challanges remain. Regenerative Medicine: Regen. Med. Sep 2011, 6(5).

Jacobs MA, Hotaling JM, Mueller BA, Koyle M, Rivara F, Voelzke BB. Conservative management vs early surgery for high grade pediatric renal trauma--do nephrectomy rates differ? Journal of Urology: 187(5):1817-1822, May 2012.

Jesus LE, Farhat WA, Amarante AC, Dini RB, Leslie B, Bagli DJ, Lorenzo AJ, Pippi Salle JL. Clinical evolution of vesicoureteral reflux following endoscopic puncture in children with duplex system ureteroceles. Journal of Urology: Oct; 186(4): 1455-1558, 2011.

Kanbur N, Pinhas L, Lorenzo AJ, Farhat W, Licht C, Katzman D. Nocturnal Enuresis in Adolescents with Anorexia Nervosa: Prevalence, Potential Causes and Pathophysiology. International Journal of Eating Disorders: 44: (4) 349-355, 2011.

Kaye JD, Srinivasan AK, Koyle MA, Smith EA, Kraft KH, Hanna MK, Kirsch AJ. Rotation of the amputated fistula tract for the management of congenital urethral-enteric fistula with severe urethral stenosis: a novel technique with long-term outcomes. Journal of Pediatric Urology: 8(2):166-173, Apr 2012.

Koyle MA, Elder JS, Skoog SJ, Matoo TK, Pohl HG, Reddy PP, Abidari JM, Snodgrass WT. Febrile urinary tract infection, vesicoureteral reflux, and renal scarring: current controversies in approach to evaluation. Pediatric Surgery International: 4: 337-346, 2011.

**Koyle MA**. Realities in Modern Day Understanding of Vesicoureteral Reflux and Childhood UTI. Dialogues in Pediatric Urology: Vol. 32, Number 6, Oct 2011.

Koyle MA. Editorial Comment. BJU Int.: 108: 1663-1664, 2011.

Koyle MA, Lorenzo AJ, Farhat WA. Minimally Invasive Open Pediatric Urology Surgery. American Urological Association News: Vol 16, Issue 9, Sept 2011.

**Koyle MA.** Hypospadias: a 30-year personal journey. Scandinavian Journal of Surgery: 100(4): 250-255, 2011.

**Koyle MA.** Comment on Performance of open renal and bladder surgery at a freestanding pediatric surgery center. Journal of Urology: 186(1):256, July 2011.



Lorenzo AJ. Risk factors for urethro-cutaneous fistula (UCF) formation post-tubularized incised plate (TIP) repair: comprehensive analysis of 1098 patients iwth distal and midshaft hypospadias. Section on Urology Annual Meeting: Boston, Mass. USA, Oct 2011

Lorenzo, AJ. To V(CUG) or Not To V(CUG)-Can We Answer the Question? Journal of Urology: 187(1):11-12, Jan 2012.

Lorenzo AJ, Pippi Salle JL, Braga LH. Innovations in Hypospadias Repair: Advances, Limitations and Areas of Uncertainty. American Urological Association News: Volume 17, Issue 1, Jan 2012.

Pippi Salle, JL. Bladder Neck Reconstruction for Refractory Urinary Continence. Japanese Journal of Pediatric Urology: Vol. 20 No. 1, 2011.

Romao R, Pippi Salle JL, Shuman S, Weksberg R, Figueroa V, Weber B, Bagli D, Grant R, Gerstle T, Lorenzo A. Nephron-sparing surgery for unilateeral wilms' tumors in children with predisposing syndromes: single center experience over 10 years. American Academy of Pediatrics: Section on Urology Annual Meeting, 16 Oct 2011.

Romão RLP, Pippi Salle JL, Wherrett DK. Update on the management of disorders of sex development. Pediatric Clinics of North America: 59(4), 853-869, 2012

Salle JL, Lorenzo AJ, Jesus LE, Leslie B, AlSaid A, Macedo FN, Jayanthi VR, de Castro R. Surgical treatment of high urogenital sinuses using the anterior sagittal transrectal approach: a useful strategy to optimize exposure and outcomes. Journal of Urology: 187 (3): 1024-1031, March 2012.

Shnorhavorian M, Jacobs MA, Stearns G, Mingin G, Koyle MA. Practice variation and clinical confusion regarding undescended testes and retractile testes among primary care respondents: a multi-regional survey study in the United States. Pediatric Surgery International: 28(6):635-639, June 2012.

Walid A. Farhat and Armando J. Lorenzo. Pediatric Anesthesia. Basic Principles - State of the Art - Future: Chapter 109. Renal Transplantation: Surgical Considerations.: Edited by: Burno Bissonnette Subeditors: Brian J Anderson, Adrian Bosenberg, Thomas Englehardt, Linda Mason, Joseph Tobias, 2011.

Zamilpa I, Koyle MA, Grady RW, Joyner BD, Shnorhavorian M and Lendvay TS. Can we rely on the presence of dextranomer-hyaluronic acid copolymer mounds on ultrasound to predict vesicoureteral reflux resolution after injection therapy? J Urol.: 185 (6 Suppl):2536-2541. 2011.

#### **INVITED VISITS**

Bägli DJ: Section on Urology Annual Meeting, Boston, Massachusetts, United States, October 2011. Risk Factors for Urethro-Cutaneous Fistula (UCF) Formation Post-Tubularized Incised Plate (TIP) Repair: Comprehenisve Analysis of 1098 Patients with Distal and Midshaft Hypospadias.

Farhat WA: The Second International Congress of Laproscopy and Minimally Invasive Surgery, Shriaz, Iran, Islamic Republic Of, 27 October 2011. Invited Speaker: Laproscopic pyeloplasty in infants.

Farhat, Walid A.: HealthAchieve, Toronto, Ontario, Canada, 8 November 2011. Panelist: Health Achieve 2011. Impact of the Procurement Directives, Driving Collaboration, Striking Balance Between Standardization vs. Patient Care, and Dealing with New Technology.

Koyle MA: British Association of Paediatric Urology, Cambridge, United Kingdom, September 2011. Invited Lecturer: "Extrophy Complex".

Koyle MA: 3rd ISHID Meeting, London, United Kingdom, September 2011. Visiting Professor: "Personal Evolution in Hypospadias".

Koyle MA: Children's Medical Center and University of Texas Southwestern, Dallas, Texas, United States, February 2012. Invited Speaker: Live Surgery Workshop for Hypospadias Repair.

Koyle MA: Dalhousie University Department of Urology, Halifax, Nova Scotia, Canada, February 2012. Visiting Professor: Open Minimally Invasive Pediatric Urological Surgery- Is it Relevant in 2012?

Koyle MA: European Society for Pediatric Urology, Zurich, Switzerland, 11 May 2012. Visiting Professor: How to Review a Paper. Presenter(s): Martin Koyle.

Lorenzo AJ: Section on Urology Annual Meeting, Boston, Massachusetts, United States, October 2011. Risk Factors for Urethro-Cutaneous Fistula (UCF) Formation Post-Tubularized Incised Plate (TIP) Repair: Comprehenisve Analysis of 1098 Patients with Distal and Midshaft Hypospadias.



Lorenzo JA: 9th Congress of South American Pediatric Surgery, Iberoamerican Society of Pediatric Urology, Punta del Este, Uruguay, 18 November 2011. Invited Speaker: (1) Disorders of sexual differentiation: vaginoplasty through the posterior sagittal approach. (2) Surgical Treatment of Neuropathic Urinary Incontinence: Bladder Augmentation, How to Avoid It? (3) Bladder Extrophy, Experience at Sick Kids Hospital, Toronto.

Lorenzo AJ: Pediatric Urology Junior Organization, Atlanta, Georgia, United States, 17 June 2012. Presenter: What can transplant surgery teach us about management of ectopic ureters in incontinent children?

Pippi Salle JL: Rishita Peterson, Lunch and Learn, Toronto, Ontario, Canada, 20 July 2011. Invited Speaker: Kidney and Bladder Reconstructions: What are all these tubes there for?

Pippi Salle JL: International Society for Hypospadias and DSD (ISHID), London, England, United Kingdom, 17-19 September 2011. (1) DSD - Refining the diagnosis. (2) State of the Art and Future Developments - Meeting Highlights. (3) Cliteroplasty - Concepts and Techniques.

Pippi Salle JL: 4th National Congress Congiunto, Padova, Italy, 23 September 2011. Presenter: (1) Mangement of proximal hypospaidas.a continuous challenge. (2) Endoscopic treatment techniques for vesicoureteral reflux.

Pippi Salle JL: Section on Urology Annual Meeting, Boston, Massachusetts, United States, October 2011. Presenter: Risk Factors for Urethro-Cutaneous Fistula (UCF) Formation Post-Tubularized Incised Plate (TIP) Repair: Comprehenisve Analysis of 1098 Patients with Distal and Midshaft Hypospadias.

Pippi Salle JL: Scientific Center of Children Health, Russian Academy of Medical Science, Moscow, Russian Federation, 31 October 2011. Invited Speaker: Hypospadias: new insights?

Pippi Salle JL: Tribute to Howard Snyder, Philadelphia, Pennsylvania, United States, 18 November 2011. Invited Speaker: Bladder Extrophy: The Sick Kids Approach.

Pippi Salle JL: Philadelphia, Pennsylvania, United States, 19 November 2011. Invited Lecturer: Extrophy Brazilian Style via Toronto.

Pippi Salle JL: 33rd Congress of the Brazilian Society of Urology, Florianopolis, Brazil, 22-26 November 2011. Invited Speaker: (1) Hypospadias: what is the best technique? (2) New approaches on the management of ureteroceles. (3) Feminizing genitoplasty. (4) VCUG: is it still necessary? (5) Bladder Augmentation: when to indicate? (6) What are the indications for nuclear scintigraphy in pediatric urology? (7) Epispadias: how to approach the bladder neck and penis? (8) Ectopic ureterocele: always a challenge!

Pippi Salle JL: University of California at Irvine, Irvine, California, United States, 27-30 January 2012. Invited Speaker: (1) Advantages and problems of managing DSD in multidisciplinary teams. (2) Latest attempts to optimize outcomes of feminizing genitoplasty. (3) Management of atypical genitalia: surgical repair is just the tip of the iceberg. Grand Rounds.

Pippi Salle JL: Dallas Children's Hospital, Dallas, Texas, United States, 24 February 2012. Visiting Surgeon: International Course on Hypospadias.

Pippi Salle JL: Workshop on Management of DSD, Annecy, France, 14-17 March 2012. (1) Chair: Chair of the Panel on "Timing and Nature of Genitoplasties". (2) Invited Lecturer: Surgery for DSD: When and How? (3) Invited Lecturer: How to Evaluate Outcomes in Hypospadias Surgery.

Pippi Salle JL: University of Ottawa, Ottawa, Ontario, Canada, 20 April 2012. Visiting Professor at CHEO. Demonstrating Live Surgeries.

Pippi Salle JL: Egyptian Urologogical Association, Atlanta, Georgia, United States, 19 May 2012. Facilitator: Current Approaches to Management of Hydronephrosis.

Pippi Salle JL: University of Iowa Department of Urology, Iowa, Iowa, United States, 1-2 June 2012. Rubin H. Flocks Visiting Professor: (1) Management of atypical genital: surgical repair is just the tip of the iceberg. (2) Management of Hypospadias: lessons learned. (3) Management of refractory urinary incontinence: principles to help in technical decisions.

#### **RESEARCH AND INVESTIGATIONS**

Center for Computer-Assisted Intervention and Innovation (CCAII). Kim P, Farhat WA, Wright J: Ontario Research Fund (ORF). (\$3,395,000 2008 - 2012).

CIHR Team in the Effects of Brominated Flame Retardans on Reproductive Health: Animal, Human, Ethical, Leagal and Social Studies Human Development, Child and Youth Health. Goodyear C, Goodyear C, Bagli DJ: Canadian Institutes of Health Research (CIHR). (\$499,000 2009 -2013).



Disruptive Technologies in Pediatric and Fetal Intervention. Kim P, Farhat WA, Wright J: Canadian Foundation of Innovation (CFI). (\$3,200,000 2009 - 2012).

E.coli-induced alterations in the uroepithelial epigenome as a marker for UTI risk. *Bagli D*, Tölg *C*, *Lorenzo A: PSI Foundation*. (\$140,000 2010 - 2012).

Interactive multi-media CD-Rom for teaching operative pediatric urology. *Khoury AE, Pippi Salle JL: University of Toronto, Information Technology Courseware Development Fund.* (\$16,795 2004 - present).

Novel Therapeutic Approaches For Obstructive Bladder Disease. *Bägli DJ: Canadian Institutes of Health Research (CIHR).* (\$440,000 2009 - 2013).

Quantitative MRI of Angiogenesis and Cellularization in Tissue Engineering. *Hai-Ling C, Farhat WA, Stanisz GJ: University of Toronto Dean's Fund.* (\$9,957 2007 - 2012).

Uropathogenic E.coli effects on the uroepithelial epigenome as a marker for UTI propensity and recurrence. *Bagli DJ, Tolg C: Physicians Services Incorporated Foundation (The) (PSI)*. (\$180,000 USD 2010 - 2012).

Uropathogenic E. Coli-induced alterations in the uroepithelial cell epigenome as a marker for urinary tract infection risk. *Bagli DJ, Tolg C, Lorenzo AJ: PSI Foundation.* (\$170,000 2010 - 2012).

#### **HONOURS RECEIVED**

Bägli DJ: First Prize, Ontario Preclinical Imaging Constortium. February 2012.

**Bägli DJ:** Post-Doctoral Fellowship Award for Urology Research, Hospital for Sick Children. 2011 - 2012.

**Farhat WA:** Award for Teaching Excellence, Urology, Dept of Surgery, Faculty of Medicine, Department of Pediatrics, University of Toronto, Hospital for Sick Children. (Postgraduate MD). 2011 - 2012.

Koyle MA: Selected, Castle Connolly "America's Top Doctors". 2009 - 2011.

Koyle MA: Selected for Seattle Super Doctors 2011 Magazine.

**Koyle MA:** Award for Teaching Excellence, Urology, Dept of Surgery, Faculty of Medicine, Department of Pediatrics, University of Toronto, Hospital for Sick Children. (Postgraduate MD). 2011 - 2012.

**Lorenzo AJ:** International Exchange Program, European Assocation of Urology and the Canadian Urological Association. 2011.





# Mount Sinai Hospital

Jay S. Wunder Surgeon-in-Chief / Rubinoff-Gross Chair in Orthopaedic Oncology

#### **HEADS OF DIVISION**

Dr. C. Swallow General Surgery
Dr. J.S. Wunder Orthopaedic Surgery
Dr. K. Jarvi Urology

#### **DIVISION OF GENERAL SURGERY**

Helen MacRae was promoted to Professor in the Department of Surgery at the University of Toronto. Anand Govindarajan and Erin Kennedy joined the Division of General Surgery in July 2011, both as Surgeons Investigator, at the rank of Assistant Professor. The division has been very productive this past year, having published over 52 articles, along with speaking internationally. Research funding has come from the American Society of Colon and Rectal Surgeons, Canadian Institutes of Health Research, Public Health Agency of Canada, Canadian Radiation Oncology Foundation/Sanofi-aventis, Canadian Institute for Photonic Innovations, Canadian Cancer Society Research Institute Innovation Grants, Cancer Care Ontario, Cancer Imaging Network of Ontario, and Ontario Institute of Cancer Research.

Finally, Robin McLeod became a life member of Colorectal Surgical Society of Australia and New Zealand in 2011 and also received the Best Paper Award from the Canadian Society of Colon and Rectal Surgeons, Canada in September 2011.

#### **DIVISION OF ORTHOPAEDICS**

Dr. Jay Wunder became the President of the Connective Tissue Oncology Society (CTOS), the foremost group for research, and treatment of bone and soft tissue tumors including sarcomas in the world. Paul Kuzyk joined the division as Surgeon-Investigator, at the rank of Assistant Professor in October 2011. Seventy-eight articles were accepted and published in journals. Research funding was received from Canadian Institutes of Health Research, Canadian Arthritis Network, Canadian Orthopaedic Foundation, and Stryker Canada.

David Backstein was selected as a member of theAmerican Association of Hip and Knee Surgeons in July 2011, awarded the Best Post Presentation, Runner Up at The Canadian Association for Medical Education, in Toronto, Ontario, in July 2011, and



received the Orthopaedic Chair's Teaching Award, from the Department of Surgery, University of Toronto, 2011 - 2012. Peter Ferguson also received the John Ruedy Award for Innovation in Medical Education, Orthopaedic Surgery from the Association of Faculties of Medicine Canada; the 2012 Award for Excellence in Postgraduate Medical Education - Development and Innovation, Postgraduate Medical Education, Toronto, Ontario, Canada, honoring him for the development and administration of Competency Based Curriculum in Orthopaedics. He was also presented with the Bruce Tovee Postgraduate Teaching Award, Orthopaedic Surgery, from the Department of Surgery, Faculty of Medicine, University of Toronto. This award celebrates an outstanding postgraduate teacher in the Department of Surgery.

#### **DIVISION OF UROLOGY**

Seventy papers were published for the year 2011-2012. Research funding was awarded from National Institutes of Health, Ontario Institute for Cancer Research, McLaughlin Centre, University of Toronto, Canadian Cancer Society, Foundation of Canada/Prostate Cancer Canada, Canadian Cancer Society Research Institute, and Institut Merieux. Alexandre Zlotta received the Basic Science Research Award from the University of Toronto at the 2011 Charles J. Robson Research Day; the EAU Platinum Award, and the Best Poster Award 2012, both from the European Association of Urology/European Urology, in Paris, France.

University of Toronto | Department of Surgery 2011-2012 Annual Report | **80** 



## Division of General Surgery

Dr. Z. Cohen Professor

Dr. A.M. Easson **Assistant Professor** Dr. R. Gladdy **Assistant Professor** Dr. R.N. Gryfe Assistant Professor Dr. A. Govindarajan **Assistant Professor** Dr. Erin Kennedy **Assistant Professor** Dr. H. MacRae Associate Professor Dr. A. McCart Associate Professor

Dr. R.S. McLeod Professor

Dr. C.J. Swallow Professor (Division Head)

#### **PUBLICATIONS**

Aarts MA, Okrainec A, Glicksman A, Pearsall E, Victor J and McLeod RS. Adoption of enhanced recovery after surgery (ERAS). Strategies for colorectal surgery at academic teaching hospitals and impact on total length of hospital stay. Surg Endosc: 2012 Feb; 26(2):442-450.

Ahmadi N, Dubois L, McKenzie M, Baxter N, Brown C, Chaudhury P, Dixon E, Fitzgerald W, Henteleff H, Kirkpatrick A, Latosinsky S, MacLean A, McLeod R. Teaching critical appraisal skills to general surgery residents: Is evidence-based reviews in surgery the answer? Canadian Journal of Surgery: 2011 Aug; 54: (Suppl): S58-S104.

Ahmadi N, McKenzie ME, Maclean A, Brown CJ, Mastracci T, McLeod RS. Teaching Evidence Based Medicine to Surgery Residents-Is Journal Club the Best Format? A Systematic Review of the Literature. J Surg Educ: 2012 Jan: 69(1): 91-100.

Al-Sukhni E, Messenger D, Milot L, Fruitman M, Schmocker S, Victor J, McLeod R, Kennedy E. Do MRI reports contain the information necessary to make appropriate decisions for preoperative chemoradiation (PRECET) for rectal cancer? Diseases of the Colon and Rectum: 2011

Al-Sukhni E, Messenger D, Milot L, Fruitman M, Schmocker S, Victor JC, McLeod RS, Kennedy ED: Do MRI reports contain the information necessary to make appropriate decisions for preoperative chemoradiation for rectal cancer? American Society of Colon and Rectal Surgeons, Vancouver, Canada. Diseases of the Colon and Rectum 2011: 54(5): e134-135.

Al-Sukhni E, Milot L, Fruitman M, Beyene J, Victor C, Schmocker S, McLeod RS, Kennedy ED: Diagnostic accuracy of MRI for assessment of T-category, nodal metastasis and circumferential resection margin involvement in patients with rectal cancer: a meta-analysis. Canadian Society of Surgical Oncology, Toronto, ON, Canada. Canadian Journal of Surgery 2011: 54(3): 209-210.

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Borowiec AM, Baxter NN, Schmocker S, Huang H, Victor JC, Krzyzanowska MK, Brierley J, McLeod RS, Kennedy ED: Are physicians willing to accept a decrease in treatment effectiveness for improved functional outcomes for low rectal cancer? The Canadian Journal of Surgery 2012: 55(4 Suppl. 1) S176.

Brar S, Helyer L, Easson AM. Palliative Surgical Care. Surgical Oncology Manual 1st Edition: Geberal Surgical Oncology Fellowship Program, Department of General Surgery, Department of Surgery, University of Toronto, 2012.



Brown CJ, Finlayson SR, Taylor MC; for the Evidence Based Reviews in Surgery Group. CAGS and ACS Evidence Based Reviews in Surgery. Access to emergency operative care: a comparative study between the Canadian and American health care systems. Can J Surg: 2011 Dec; 54(6): 403-406.

**Brown CJ, Gallinger S and Church J.** Long-term effects of aspirin on colorectal cancer. J Am Coll Surg: 2012 Jun; 214(6): 1023-1026.

Brown CJ, McLeod RS. Colorectal Polyps. In: Current Surgical Therapy. (Cameron JL, Cameron AM: eds.). Elsevier, USA, 2011.

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Correa R, Ripamonti CI, Dodge JE, Easson AM. Malignant Bowel Obstruction. Supportive Oncology: In: (David MP, Feyer P, Ortner P, Zimmerman C, eds). Elsevier Inc, Philadelphia 2011.

de Montbrun S, Maclellan S, Khalili K, Easson AM. Post-Traumatic Morel-Lavallee lesion of the lower back mimicking an abscess. Surgical Science: 2012 Feb; 3: 213-215.

**Dixon E**, **Cheadle WG**, **Khadaroo RG**. Is chlorhexidine-alcohol more effective than povidone-iodine? J Am Coll Surg: 2012 Mar; 214(3):374-376.

**Douplik A, Leong WL, Easson A, Done SJ, Netchev G, Wilson BC.** Preliminary experience of autofluorescence mammary ductoscopy. SPIE Newsroom (International Society for optics and photonics): 24 Oct 2011.

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Govindarajan A, Arnaoutakis D, D'Angelica M, Allen PJ, Dematteo RP, Blumgart LH, Jarnagin WR, Fong Y. The use of intraoperative ablation extends the limits of potentially curative treatment for recurrent colorectal liver metastases. Journal of Gastrointestinal Surgery: 2011; 15:1168-1172.

Govindarajan A, Gonen M, Weiser M, Wong WD, Shia J, Nash GM. Challenging the feasibility and clinical significance of current guidelines on lymph node examination in rectal cancer in the era of neoadjuvant therapy. Journal of Clinical Oncology: 2011; 29(34):4568-4573.

Govindarajan A, Paty PB. Predictive markers for hepatic recurrence in colorectal cancer. Future Oncology: 2011; 7:299-307.

Govindarajan A, Reidy D, Weiser MR, Paty PB, Temple LK, Guillem JG, Saltz, LB, Wong WD, Nash GM. Recurrence rates and prognostic factors in ypN0 rectal cancer after neoadjuvant chemoradiation and total mesorectal excision. Annals of Surgical Oncology: 2011; 18(13): 3666-

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McAlister E, Kennedy ED, Fenech D, McLeod RS, Cohen Z: Colon Cancer. In: Surgical Oncology Manual (Cukier M, Gillis A, Escallon J, Wright F, eds). University of Toronto, Department of Surgery, Toronto 2012: 72-80.

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- Pearsall E, Aarts M-A, Meghji Z, McLeod R, Okrainec A. Enablers and barriers to implementation of an enhanced recovery after surgery protocol: viewpoints of members of a perioperative multidisciplinary team. Canadian Journal of Surgery: 2011 Aug; 54(Suppl).
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- Tyler AD, Murdoch TB, Riddell RH, Cohen Z, Silverberg MS. Celiac Disease Detected by Pouch Biopsy of a Patient with Ileal Pouch-Anal Anastomosis. Am J Gastroenterology: Jul 2011; 106(7): 1367-1368.
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Wright F, Spithoff K, Easson A, Murray C, Toye J, McCready D, Petrella T, and the Melanoma Disease Site Group of Cancer Care Ontario's Program in Evidence-Based Care. Primary Excision Margins and Sentinel Lymph Node Biopsy in Clinically Node-Negative Melanoma of the Trunk or Extremities. Current Oncology: 2011 Nov; 23:572-578.

#### **INVITED VISITS**

Cohen Z: American Gastroenterological Association Annual Meeting, Research Forum Digestive Diseases Week, San Diego, California, United States, May 2012. Invited Speaker: (1) Digestive Diseases. (2) Controversies in pelvic pouch surgery.

Cohen Z: American Society of Colon and Rectal Surgeons, San Antonio, Texas, United States, June 2012. Invited Speaker: Symposium on inflammatory bowel diseases.

Cohen Z: University of Alberta, Calgary, Alberta, Canada, June 2012. Invited Lecturer: Controversial issues in IBD.

Easson AM: British Columbia Surgical Oncology Network, Vancouver, Ontario, Canada, 22 October 2011. Invited Speaker: Speaker of the Royal College of Physicians and Surgeons of Canada: Palliative Surgery in Cancer Care.

Easson AM: Ontario Association of General Surgery, Toronto, Ontario, Canada, 29 October 2011. Invited Speaker: Surgery and Palliative Care: Care when there is no cure.

Easson AM: Melanoma Network of Canada, Toronto, Ontario, Canada, 3 December 2011. Invited Speaker: The Surgical Management of Melanoma. Presentation to patients, families and Caregivers with melanoma.

Gladdy R: Toronto Cancer Conference 2011. Ideas and Innovations in Cancer Management along the Cancer Care Continuum, Toronto, Ontario, Canada, 24 October 2011. Presenter: Dealing With the Unexpected. Principles for the General Surgeon.

Govindarajan A: Toronto Cancer 2011, Toronto, Ontario, Canada, 2011. Invited Speaker: Peritoneal malignancy: When can surgeons help?

Kennedy E: Cleveland Clinic, Cleveland, Ohio, USA, Aug 2011. Colorectal Cancer Consortium.

Kennedy E: American College of Surgeons, San Francisco, CA, October 2011. Development and pilot testing of MRI reports for primary rectal cancer. Surgical Outcomes Club.

Kennedy E: Samuel Lunenfeld Research Institute. Toronto, Ontario. May 27, 2011: Radiology: Standardization of MRI for Rectal Cancer. Update in Surgical Oncology.

MacRae HM: ASCRS 2012, San Antonio, Texas, United States, June 2012. Invited Speaker: Teaching Technical Skills: From Simulators to the OR.

McLeod RS: Rupert Turnbull Lecture, Tripartite Colorectal Meeting, Cairns, Australia, July 2011. Invited Lecturer: Colorectal Surgery in the Age of Evidence Based Medicine.

McLeod RS: Herrand Abcarian Lecture, American College of Surgeons, California, United States, October 2011. (1) Invited Lecturer: Improving the Quality of Cancer Surgery in a Single Payer System. (2) Facilitator: Evidence Based Reviews in Surgery: Chlorhexidine or Povidone Iodine for Skin Prep? Journal Club on Steriods. (3) Presenter: Cancer Care Ontario's Syurgical Wait Times Initiatives.

McLeod RS: Staten Island University Hospital, New York, United States, February 2012. Invited Lecturer: (1) Surgery for Ulcerative Colitis. (2) Translating Evidence into Practice.

McLeod RS: Buffalo-State University of New York, New York, United States, March 2012. Invited Lecturer: Improving the Quality of Cancer Surgery.

McLeod RS: SUNY Stonybrook University, Long Island, New York, United States, March 2012. Invited Lecturer: (1) Prevention of Recurrance following Surgery for Crohn's Disease. (2) Can we Practice Evidence Based Medicine?

McLeod RS: Beth Isreal, Deaconess Medical Centre, Boston, Massachusetts, United States, March 2012. Invited Lecturer: Translating Evidence into Practice.

#### RESEARCH AND INVESTIGATIONS

A new assessment tool for colorectal fellows: the colorectal objective structured assessment of technical skill (COSATS). de Montbrun SL, MacRae HM: The Operative Competency Evaluation Committee of the American Society of Colon and Rectal Surgeons (ASCRS). (\$70,000 USD 2010 - 2011).



A Phase I/II study of high dose rate brachytherapy for the palliation of rectal cancer. Wong KSR, Bayley A, Brierley J, Cummings B, Dinniwell R, Kennedy E, Le L, Ringash J, Jezioranski J, Kim E, Easson AM: Canadian Radiation Oncology Foundation/Sanofi-aventis, Research Innovation Award CASARIA. (\$20,000 2010 - present).

A start-up corporation developing a hand-deld digital optical imaging platform for real-time preclinical and clinical applications. DaCosta R, Wilson B, Leong W, Done S, Easson AM: Canadian Institute for Photonic Innovations (CIPI), Technology, Expolitation and Networking (TEN). (\$50,000 2011 - 2012).

Best Practice in General Surgery Multidisciplinary Consensus Workshop on Perioperative Care. Aarts MA, Okrainec A, Pearsall E, Fenech D, Lindsay D, Nathens A, Rotstein L, Stotland P, Smith A, McLeod, Robin S: Canadian Institutes of Health Research. (\$13,750 2010 - 2011).

CIHR Strategic Training Grant in the Development of Biological Therapeutics. Hampson D, Allen CJ, Bendayan R, Boyd SR, Bremner R, Gariepy J, Mak TW, McCart JA, Medin JA, Monnier PP, Pang KCS, Reilly RM, Schimmer AD, Van Der Kooy DJ: Canadian Institutes of Health Research (CIHR). (\$1,787,630 2009 - 2015).

Clinical Validation of PRODIGI, a New Handheld Optical Imaging Technology for Real-time Intraoperative-guidance of Breast Tumour Resection. DaCosta R, Leong W, Wilson B, Done S, Easson A: Canadian Cancer Society Research Institute Innovation Grants. (\$160,000 2011 - 2013).

Comparison of breast seroma delineation between clinical specialist radiation therapist and radiation oncologist. Lee G, Fyles A, Cho J, Fenkell L, Harnett N, Manchul L, Tran P, Wang T, Dinniwell R, Easson AM. (2009 - present).

Development of PRODIGI, a Handheld Optical Imaging Technology for Real-time Intraoperativeguidance of Breast Tumour Resection. DaCosta R, Done S, Leong W, Wilson B, Easson AM: Canadian Institutes of Health Research, Cancer Research. (\$145,000 2011 - present).

Establishing a national agenda and research network for shared decision making in oncology in Canada. Kennedy ED, O'Brien MA, Gagliardi A: Canadian Institutes of Health Research (\$20,000 2011

Establishing validity, reliability, feasibility and standard setting of the colorectal objective assessment of technical skill (COSATS). de Montbrun SL, MacRae HM: The Operative Competency Evaluation Committee of the American Society of Colon and Rectal Surgeons (ASCRS). (\$100,000 USD

Evaluating a synoptic MRI report as a knowledge translation intervention for rectal cancer. Kennedy ED, McLeod RS, Milot L, Fruitman M, Brown G, Victor JC: CCO/OICR Knowledge Translation Research Network (\$49,585 2012-2013)

Generation of De Novo molecular targets for optical imaging-guided surgical interventions in breast cancer. DaCosta R, Leong W, Wilson B, Done S, Easson AM: Cancer Care Ontario, Cancer Imaging Network of Ontario. (\$100,000 2011 - present).

Growth of Tumor Infiltrating Lymphocytes (TIL). and Tumor Cells (TC). from human melanoma explants. Ohashi P, Nguyen L, Ghazarian D, Leung W, McCready D, Joshua, A, Rosenberug S, Easson AM. (July 2007 - present).

Ontario Regional BioTherapeutics Program (ORBiT). Bell JC, Atkins H, Auer RC, Bramson J, Chow L, Foley RS, Keating A, Lichty BD, McCart JA, Medin JA, Ohashi P, Stojdl DF, Wan Y, Zhang L.: Ontario Institute of Cancer Research. (\$10,000,000 2009 - 2013).

Patient and physician preferences for the management of low rectal cancer. McLeod R, Kennedy E: American Society of Colon & Rectal Surgeons. (\$49,690 USD 2010 - 2012).

Patient and physician preferences for the management of low rectal cancer. McLeod RS, Kennedy ED, Smith A, Baxter N, Brierley J, Kim J, Victor C: American Society of Colon and Rectal Surgeons (\$49,690 2010 - 2013)

Quality improvement project: cancer staging using proforma reporting in Radiology. Brown G. Rockall A, Olliff J, Padhani A, Peake M, Finan P, Rashbass J, Beckett H, Dollamore G., Parkinson N, Kennedy E, Fruitman M, Milot L: The Academy of Medical Royal Colleges (\$78,120 2011 - 2012)

Selected Therapies and Functional Genomics in Sarcoma. Gladdy R: Ontario Institute for Cancer Research. (\$1,750,000 2008 - 2013).

#### **HONOURS RECEIVED**

McLeod RS: Life Member, Colorectal Surgical Society of Australia and New Zealand. 2011.

McLeod RS: Best Paper, Canadian Society of Colon and Rectal Surgeons, Canada. September 2011.



## Division of Orthopaedics

Dr. D. Backstein Associate Professor

Dr. R.S. Bell Professor

Dr. P.C. Ferguson Associate Professor

Dr. A.E. Gross Professor

Dr. P. Kuzyk Assistant Professor
Dr. O. Safir Assistant Professor

Dr. J.S. Theodoropoulos Lecturer
Dr. T. Willett Lecturer

Dr. J.S. Wunder Professor (Division Head)

#### **PUBLICATIONS**

**Abolghasemian M, Backstein D.** The association of knee arthroplasty outcome with body mass index and alignment: the end of an old debate? Journal of Bone & joint Surgery (A): 2012 May; 94(9):1-3.

Al-Jahwari A, Schemitsch EH, Wunder JS, Ferguson PC, Zdero R. The biomechanical effect of torsion on humeral shaft repair techniques for completed pathological fractures. J Biomech Eng: 2012 Feb; 134(2):024501.

Backstein D, Gross AE, Safir O, Aderinto JB. High tibial osteotomy. In: Advanced Reconstruction Knee (The Knee Society). (Lieberman JR, Berry DJ, Azar FM: eds.) American Academy of Orthopaedic Surgeons, Rosemont, IL, 2011: 527-536.

**Backstein D, Gross AE, Safir O, Aderinto JB.** Revision total knee arthroplasty: Bone loss management using structural grafts.: In: Advanced Reconstruction Knee (The Knee Society). (Lieberman JR, Berry DJ, Azar FM: eds.) American Academy of Orthopaedic Surgeons, Rosemont, IL, 2011: 423-431.

**Backstein D, Kuzyk P.** Understanding Rotation of the Tibial Component in TKA: Is This Biomechanical Study Actually Helpful in the OR? Journal of Bone and Joint Surgery (American): 2011 Nov; 93(21):1-2.

Backstein DJ, Lakstein D, Zarrabian M, Kosashvili Y, Safir O, Gross AE. Revision total knee arthroplasty for component malrotation is highly beneficial. The Journal of Bone and Joint Surgery: Volume 93-B, 2011, Orthopaedic Proceedings Supplement IV; Canadian Orthopaedic Association; 559.

Biau DJ, Ferguson PC, Chung P, Griffin AM, Catton CN, O'Sullivan B and Wunder JS. Local recurrence of localized soft tissue sarcoma: A new look at old predictors. Cancer: 2012 May. doi: 10.1002/cncr.27639.

Biau DJ, Ferguson PC, Turcotte RE, Chung P, Isler MH, Riad S, Griffin AM, Catton CN, O'Sullivan B and Wunder JS. Adverse effect of older age on the recurrence of soft tissue sarcoma of the extremities and trunk. J Clin Oncol: 2011 Oct; 29(30):4029-4035.

Bistolfi A, Massazza G, Backstein D, Ventura S, Cerlon R, Crova M. Adult congenital permanent bilateral dislocation of the patella with full knee function: case report and literature review. Case Report in Medicine: 2012:182795. Epub 2012 Jan.

Brandon A, Ramo, Anthony M. Griffin, corey S. Gill, Douglas J. McDonald, Jay S. Wunder, Peter Ferguson, Robert S. Bell, Sharon E. Phillips, Herbert S. Schwartz, Ginger E. Holt. Incidence of Symptomatic Venous Thromboembolism in Oncologic Patients Undergoing Lower-Extremity Endoprosthetic Arthroplasty. Journal of Bone and Joint Surgery (American): 2011; 93:847-854.

Coroneos CJ, O'Sullivan B, Ferguson PC, Chung PW and Anastakis DJ. Radiation Therapy for Infiltrative Giant Cell Tumor of the Tendon Sheath. J Hand Surg Am: 2012 Apr; 37(4):775-782.

Dickson BC, Gortzak Y, Bell RS, Ferguson PC, Howarth DJ, Wunder JS and Kandel RA. p63 expression in adamantinoma. Virchows Arch: 2011 Jul; 459(1):109-13.

Ferguson PC, Deheshi BM, Chung PWM, Catton CN, O'Sullivan B, Gupta A, Griffin AM, Wunder JS. The outcome of surgical management of patients with soft tissue sarcoma presenting with metastatic disease. Cancer: 2011: 117(2): 372-379.

Ferguson PC, Zdero R, Schemitsch EH, Deheshi BM, Bell RS, Wunder JS. A Biomechanical Evaluation of Press-Fit Stem Constructs for Tumor Endoprosthetic Reconstruction of the Distal Femur. J Arthroplasty: 2011 Dec; 26(8):1373-1379.



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- Garbedian S, Sternheim A, Backstein D. Distal Femoral Varus Osteotomy: Unloading the Lateral Compartment: Long-term Follow-up of 45 Medial Closing Wedge Osteotomies. Orthopedics: Sept. 9 2011; 34(9):e516-8.
- Garbedian S, Sternheim A, Backstein D. Wound healing problems in total knee arthroplasty. Orthopedics: 2011 Sept; 34(9):e516-8.
- Garbuz DS, Masri BA, Duncan CP, Greidanus NV, Bohm ER, Petrak MJ, Della Valle CJ, Gross AE. The Frank Stinchfield Award - Dislocation in Revision THA - Do large heads (36 and 40mm) result in reduced dislocation rates in a randomized clinical trial. Clinical Orthopaedics and Related Research: 2012 Feb; 470(2):351-356.
- Grierson L, Melnyk M, Jowlett N, Backstein D, Dubrowski A. Bench Model Surgical Skill Training Improves Novice Ability to Multitask: A Randomized Controlled Study. Studies in Health Technology and Informatics: 2011; 163:192-219.
- Griffin AM, Ferguson PC, Catton CN, Chung PW, White LM, Wunder JS, Bell RS, O'Sullivan B. Long-term outcome of the treatment of high-risk tenosynovial giant cell tumor/ pigmented villonodular synovitis with radiotherapy and surgery. Cancer: 2012 Jan 26. doi: 10.1002/cncr.26529.
- Gross AE. Patellar resurfacing for total knee replacement: Ultimate answer may lie in subgroups. The Journal of Bone and Joint Surgery (Am): Commentary on an article by Suzanne Breeman PhD, et al.: Patellar resurfacing in total knee replacement: Five-year clinical and economic results of a large randomized controlled trial. 2011 Aug; 93(16):1568.
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#### **INVITED VISITS**

#### **Abstracts and Other Papers**

Backstein D: The Insall Club, Taormina, Sicily, Italy, 2 July 2011. Speaker: Management of Periprosthetic Fractures of the Knee: Distal Femoral Allograft Vs. Distal Femoral Replacement.

Backstein D: Jefferson Medical College, Philadelphia, Pennsylvania, United States, 3 November 2011. Visiting Professor: Evaluation of the Painful Total Knee Replacement and the Impact of Malrotation.



**Backstein D:** Current Concepts in Joint Replacement, Las Vegas, Nevada, United States, 21 May 2012. Invited Speaker: (1) Tibial and Femoral Malrotation: Prevention and Treatment. (2) Ensuring the Happy Total Knee Patient: No Shrink Required. (3) Difficult Knee Cases Panel Member.

**Ferguson P:** Canadian Orthopaedic Association, St. John's, Canada, July 2011. Presenter: Early results of tumor endoprosthetic reconstruction using the restoration stem.

Ferguson, Peter: McGill University Department of Orthopaedic Surgery, Montreal, Quebec, Canada, 8 December 2011. Levitt Visiting Professor: (1) At the Precipice of Radical Curricular Reform in Orthopaedic Training – Jump or Go Back? (2) Diagnosis and Management of Bone Sarcomas.

**Ferguson P:** University of Western Ontario Division of Orthopaedic Surgery, London, Ontario, Canada, 21 December 2011. Visiting Professor: (1) Metastatic Bone Disease - What Every Orthopaedic Surgeon Should Know. (2) Bone Sarcomas - Case Presentations.

**Ferguson, Peter:** Canadian Orthopaedic Resident Review Course in Joint Reconstruction, Mississauga, Ontario, Canada, 20 January 2012. (1) Invited Lecturer: Benign Bone Tumours. (2) Facilitator: Musculoskeletal Tumours - case based discussion.

Ferguson P: American Academy of Orthopaedic Surgeons, San Francisco, California, United States, 11 February 2012. Invited Speaker: The Management of Incompletely Excised Sarcomas.

**Ferguson P:** Professional Association of Interns and Residents of Ontario, Ontario, Canada, 2 March 2012. Invited Speaker: At the Precipice of Radical Curricular Reform in Orthopaedic Training – Jump or Go Back?

**Ferguson P:** Association for Surgical Education, San Diego, California, United States, 23 March 2012. Speaker: A New Approach to Evaluating Resident Performance.

**Ferguson P:** Canadian Postgraduate Deans Annual Meeting, Banff, Alberta, Canada, 13 April 2012. Invited Speaker: A Pilot Competency Based Curriculum in Orthopaedic Surgery – Highlights of the first 3 years.

**Ferguson P:** Queen's University PGME Summit, Kingston, Ontario, Canada, 2 May 2012. Invited Speaker: A Pilot Competency Based Curriculum in Orthopaedic Surgery – Highlights of the first 3 years.

**Ferguson P:** Canadian Orthopaedic Association, Ottawa, Ontario, Canada, 9 June 2012. (1) Invited Speaker: Pelvic Reconstruction after Resection of Benign Bone Tumours. (2) Facilitator: Instructional Course Lecture - Reconstruction for Massive Bone Loss in the Pelvis.

Gross A: Zimmer Institute & Grants Office, Asia Pacific, New Delhi, Pune and Mumbai, India, July 2011. Invited Speaker: (1) Acetabular Revision Trabecular Metal and Bone Augments. (2) Fresh Osteochondral Allografts for Joint Defects. (3) A Day in the Life of the Revision Surgeon. (4) Femoral Revision Classification & Principles of Reconstruction. (5) Femoral Modular Revision - ZMR. (6) Modified Trochanteric Slide for Hip Revision. (7) Revision Cases. (8) Total Hip Replacement for Dysplasia. (9) Video Techniques Acetabular Revision.

Gross A: A.C.A.R.O, Buenos Aires, Argentina, 1 September 2011. Invited Speaker: XVIII Argentine Hip and Knee Meeting. (1) Acetabular revision: Classification and treatment guidelines (2) Femoral revision: Classification and treatment guidelines (3) Reconstruction rings in pelvic discontinuity (4) THR for dysplasia (5) Converting arthrodesis to THR (6) Fresh osteochondral allografts for posttraumatic defects of the knee (7) PFA in hip revision.

**Gross A:** Zimmer, Buenos Aires, Argentina, 2 September 2011. Distinguished Speaker: (1) Acetabular revision: Classification and treatment guidelines. (2) Femoral modular revision - ZMR. (3) Modified trochanteric slide.

**Gross A:** Zimmer, Montreal, Quebec, Canada, 2 September 2011. Distinguished Speaker. Presenter(s): Gross AE. Prevention of dislocation in hip revision (2) Cases (3) Massive bone loss: Pelvic discontinuity and beyond (4) Proximal femoral allografts in hip revision.

**Gross A:** Prague, Czech Republic, 8 September 2011. Presenter: International Hip Society Closed Meeting. The reconstruction of periprosthetic pelvic discontinuity.

**Gross A:** The Hip Society, New Albany, Ohio, United States, 23 September 2011. Presenter: Total hip replacement reliably improves function in patinets with dwarfism.

**Gross A:** SAOT - Sociedad Antioquena De Ortopedia Y Traumatologica, Medellin, Colombia, Brazil, 5-6 October 2011. Distinguished Speaker: V International Knee Course on Knee Surgery. (1) The use of trabecular metal in revision arthroplasty of the acetabulum. (2) The cup-cage reconstruction for pelvic discontinuity. (3) Fresh osteochondral allografts for posttraumatic knee defects. (4) Osteotomies above the knee for OA.



- Gross A: Harvard Medical School Department of Continuing Education, Cambridge, Massachusetts, United States, 26-27 October 2011. Invited Lecturer: (1) Revision Femoral Fixation; What is Working? (2) Proximal Femoral Allograft for Complex Revision. (3) Keynote Address: Optimum Use of ETO/The Varus Femur.
- Gross A: Chinese Orthopaedic Association and Zimmer, Beijing, China, 2-4 December 2011. Invited Speaker: 13th Asia-Pacific Arthroplasty Society Annual Meeting. (1) Key points to make your THA perfect. (2) Pelvic discontinuity - the cup cage and metal augment. (3) TM revision cup & TMARS in revision hip. (4) Pelvic discontinuity with massive bone loss: Emergent strategies.
- Gross A: Current Concepts Institute, Orlando, Florida, United States, 8-9 December 2011. Presenter: 28th Annual Current Concepts in Joint Replacement Winter 2011. (1) Hip fusion conversion: No clergy required. (2) Trabecular metal augments: A bone deficiency solution. (3) Massive bone loss: Pelvic discontinuity and beyond. (4) Fresh osteochondral allografts: The whole enchilada!
- Gross A: Zimmer Inc., Essex Junction, Vermont, United States, 16 December 2011. Facilitator: TM Application in Revision Hip and Knee.
- Gross A: Current Concepts Institute, Las Vegas, Nevada, United States, 23 May 2012. Presenter: 13th Annual Current Concepts in Joint Replacement Spring 2012. (1) Massive bone loss: pelvic discontinuity & beyond (2) Total hip revision: a day in the life of.
- Kuzyk P: American Academy of Orthopaedic Surgery Meeting, 2011. Presenter: Femoral Head Lag Screw Position for Cephalomedullary Nails: A Biomechanical Analysis.
- Kuzyk P: Orthopaedic Trauma Association Meeting, 2011. Presenter: Femoral Head Lag Screw Position for Cephalomedullary Nails: A Biomechanical Analysis.
- Kuzyk P: Canadian Orthopaedic Assoication, Ottawa, Ontario, Canada, 2012. Presenter: (1) Radiographic Evidence of Cam Type Femoroacetabular Impingement in Young Patients with Hip Osteoarthritis. (2) Cross-Linked versus Conventional Polyethylene for Total Hip Arthroplasty: A Meta-Analysis of Randomized Controlled Trials. (3) Does Femoral Retroversion Affect Outcomes for Femoral Acetabular Impingement Surgery? (4) Reconstruction of Acetabular Bone Deficiency in Revision Total Hip Arthroplasty with Shelf Grafts in Hip Dysplasia A Long -Term Survivorship Comparison between Cemented and Uncemented Cups. (5) Entry Point for Intramedullary Nailing of Femoral Shaft Fractures: A Systematic Review and Meta-analysis. (6) External Fixation versus Open Reduction with Plate Fixation for Distal Radius Fractures: A Meta-analysis of Randomized Controlled Trials. (7) Porous Metal Revision Shells for Management of Contained Acetabular Bone Defects at 5 to 10 Years Follow-up. (8) Segmental Proximal Femoral Bone Loss and Revision Arthroplasty in Developmental Dysplasia of the Hip: The Role of Proximal Femoral Allograft. (9) Radiographic evidence of Pincer-type femoroacetabular impingement in patients with end stage hip osteoarthritis.
- Kuzyk P: International Society of Orthopaedic Surgery and Traumatology (SICOT), Debai, United Arab Emirates, 2012. Presenter: Radiographic evidence of Pincer-type femoroacetabular impingement in patients with end stage hip osteoarthritis.
- Kuzyk P: European Federation of National Associations of Orthopaedics and Traumatology (EFORT), Berlin, Germany, 2012. Presenter: Radiographic evidence of Pincer-type femoroacetabular impingement in patients with end stage hip osteoarthritis.
- Kuzyk P: Orthopaedic Research Society, San Francisco, California, United States, 2012. Presenter: Does Femoral Retroversion Affect Outcomes for Femoral Acetabular Impingement Surgery?
- Kuzyk P: American Academy of Orthopaedic Surgery, San Francisco, California, United States, 2012. Presenter: Radiographic Evidence of Cam Type Femoroacetabular Impingement in Young Patients with Hip Osteoarthritis.
- Kuzyk P: Canadian Orthopaedic Association, Minneapolis, Minnesota, United States, 2012. Presenter: External Fixation versus Open Reduction with Plate Fixation for Distal Radius Fractures: A Meta-analysis of Randomized Controlled Trials.
- Safir O: British Orthopaedic Association, Dublin, United Kingdom, 15 September 2011. Presenter: The use of proximal femoral allograft in the restoration of bone stock in the revision hip surgery.
- Willett T: 2011 World Congress on Osteoarthritis, San Diego, California, United States, September 2011. Presenter: A New Model to Study the Effects of Advanced Glycation Endproducts on the Progression of Spontaneous Osteoarthritis.
- Willett T: 33rd Annual Meeting of the American Society of Bone and Mineral Research, San Diego, California, United States, September 2011. Presenter: The Effect of Advanced Glycation Endproducts on Cortical Bone Mechanical Properties.



**Wunder JS:** The Society of Pelvic Surgeons, Toronto, Ontario, Canada, 15 September 2011. Invited Speaker: An Approach to Patients with Pelvic Bone Sarcoma.

**Wunder, Jay Steven:** American Academy of Orthopaedic surgeons, San Francisco, California, United States, 10 February 2012. Invited Lecturer: Surgical management of incompletely excised STS.

#### RESEARCH AND INVESTIGATIONS

#### Peer-Reviewed Grants

A Murine Model of Adynamic Bone Disease. 120,000CAD /year for 4 years. Grynpas M, Alman B, Willett T: Canadian Institutes of Health Research (CIHR), Operating Grant. (\$480,000 2010 - 2014).

Biomechanics of Novel Implant for Unstable Hip Fracture Fixation. Schemitsch E, Walmsley D, Kuzyk P: Stryker Canada. (2011 - present).

Cancer Stem Cells: Musculoskeletal Tumours. Alman B, Dick J, Wunder JS: Ontario Institute for Cancer Research (OICR). (\$759,000 2008 - 2012).

Characterizing the Sarcoma Tumor Initiating Cell: Implications for the Development of Novel Treatments for Undifferentiated Pleomorphic Sarcoma. *Alman BA, Wunder JS: Canadian Institutes of Health Research (CIHR)* (\$732,722 - 2012-2017)

Commercialization of Irradiation-Sterilized Musculoskeletal Allografts for Improved Biomechanical Performance. *Willett T: Canadian Arthritis Network, Commercialization Development Grant Program.* (\$40,000 2011 - 2012).

Comparison of a Retrograde Intramedullary Nail, Polyaxial Locking Plate, and Intramedullary Fibular Strut Allograft with Polyaxial Locking Plate for Fixation of Periprosthetic Distal Femur Fracture Post Total Knee Arthroplasty. Kuzyk P, Backstein D, Willett T: Orthopaedic Research and Education Foundation, Young Investigator Grant. (\$40,000 USD 2012).

Engineering of Irradiation-Sterilized Musculoskeletal Allografts for Improved Biomechanical Performance. *Willett T, Grynpas M: Canadian Institutes of Health Research (CIHR), Operating Grant.* (\$230,350 2011 - 2014).

Hedgehog signaling in cartilage neoplasia and development. *Alman B, Wunder JS: Canadian Institutes of Health Research (CIHR).* (\$807,945 2008 - 2013).

Repair of early joint damage - a tissue engineering approach. Kandel R, Grynpas M, Pilliar R, Erkorkmaz K, Gross AE, Hurtig A, Nagy M, Papini WL, Stanford E, Toyserkani E, Waldman SD, White L, Zalzal P: Canadian Institutes of Health Research (CIHR). (\$2,400,000 2007 - 2012).

#### **HONOURS RECEIVED**

Backstein D: Selected as Member, American Association of Hip and Knee Surgeons. July 2011

**Backstein D:** Best Post Presentation, Runner Up, The Canadian Association for Medical Education, Toronto, Ontario, Canada. July 2011

**Backstein D:** Orthopaedic Chair's Teaching Award, Orthopaedic, Department of Surgery, University of Toronto, Division of Orthopaedic Surgery. 2011 - 2012

**Ferguson P:** John Ruedy Award for Innovation in Medical Education, Orthopaedic Surgery, Dept of Surgery, Faculty of Medicine, Association of Faculties of Medicine Canada. (Postgraduate MD).

**Ferguson P:** 2012 Award for Excellence in Postgraduate Medical Education - Development and Innovation, Orthopaedic Surgery, Dept of Surgery, Faculty of Medicine, Faculty of Medicine Postgraduate Medical Education, Toronto, Ontario, Canada. Selected for development and administration of Competency Based Curriculum in Orthopaedics. 2012

**Ferguson P:** Bruce Tovee Postgraduate Teaching Award, Orthopaedic Surgery, Dept of Surgery, Faculty of Medicine, University of Toronto Department of Surgery. Outstanding postgraduate teacher in Department of Surgery. 2012

Wunder J: President of the Connective Tissue Oncology Society (CTOS).



# Division of Plastic and Reconstructive Surgery

Dr. H.N. McKee Professor
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#### **PUBLICATIONS**

Hatzantonis C, Agur A, Naraghi A, Gauthier S, McKee N. Dissecting the accessory soleus muscle: a literature review, cadaveric study and imaging study. Clinical Anatomy: 2011; 57(8):903-910

Ravichandiran M, Ravichandiran N, Ravichandiran K, McKee NH, Richardson D, Oliver M, Agur AM. Neuromuscular partitioning in the extensor carpi radialis longus and brevis based on intramuscular nerve distribution patterns: A three-dimensional modeling study. Clinical Anatomy: 2012; 25(3):366-372.

Ravichandiran K, Singh K, Oliver M, McKee N, Agur A. Parametric b-spline representation of the fiber bundle architectural pattern of extensor carpi radialis longus and brevis. Clinical Anatomy: 2011; 24: 1034.

## Div

# Division of Urology

Dr. E.D. Grober Assistant Professor
Dr. K. Jarvi Professor (Division Head)
Dr. C.K. Lo Associate Professor

Dr. A. Zlotta Professor

#### **PUBLICATIONS**

#### **Journal Articles**

Al Bakri A, Lo K, Grober E, Cassidy D, Cardoso JP, Jarvi K. Time course for the improvement in semen parameters following varicocelectomy. Journal of Urology: 2012: Jan; 187(1):227-231. Epub 2011 Nov 17.

Alkhateeb S, Fleshner NE, Jewett MAS, Trachtenberg J, Zlotta AR, Finelli A. Surgeonvolume and outcome relation in transurethral resection of bladder tumour (TURBT). Eur Urol Suppl: 2012: 11 (1): e1049, e1049a.

Alkhateeb SS, Neill M, Bar-Moshe S, van Rhijn B, Kakiashvili DM, Fleshner E, Jewett M, Petein M, Schulman C, Hanna S, Bostrom PJ, Roumeguere T, Shariat SF, Rorive S, Zlotta AR. Long-term prognostic value of the combination of EORTC risk group calculator and molecular markers in non-muscleinvasive bladder cancer patients treated with intravesical Bacille Calmette-Guérin. Urology Annals: 2011: 3(3): 119-126.

Almatar A, Margel D, Finelli A, Chung H, Fleshner N, Zlotta A, Legere L, Ajzenberg H, Jewett M. Natural history of renal function in untreated kidney cancer. J Urol Suppl: 2012: 187 (4): e677-e678.

Baazeem A, Belzile E, Ciampi A, Dohle G, Jarvi K, Salonia A, Weidner W, Zini A. Varicocele and male factor infertility treatment: a new meta-analysis and review of the role of varicocele repair. European Urology: 2011: Oct;60(4):796-808. Epub 2011 Jul 15.

Batruch I, Lecker I, Kagedan D, Smith C, Mullen B, Grober E, Lo K, Diamandis EP, Jarvi K. Proteomic analysis of seminal plasma from normal volunteers and post-vascectomy patients identifies over 2000 proteins and candidate biomarkers of the urogenital system. Journal of Proteome Research: 2011: 10(3): 941-953.

Batruch I, Smith CR, Mullen BJ, Grober E, Lo KC, Diamandis EP, Jarvi KA. Analysis of seminal plasma from patients with non-obstructive azoospermia and identification of candidate biomarkers of male infertility. Journal of Proteome Research: 2012 Mar 2;11(3):1503-1511. Epub 2012 Feb 2.



- Bin-Saleh S, Margolis M, Jarvi K and Lo KC. The Use of Ultrasound and Radiologic Imaging in the Diagnosis of Male Infertility. In: Infertility In The Male, 4th Edition. (Craig Neiderberg and Larry Lipshultz: ed.) Cambridge University Press, Cambridge, UK. 2009: 375-391. 2011.
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**Zlotta AR.** What is the future of virtual cystoscopy in urology? Can Urol Assoc J: 2011: 5(1): 38-39.

**Zlotta AR.** Limited, extended, superextended, megaextended pelvic lymph node dissection at the time of radical cystectomy: what should we perform? Eur Urol: 2012 Feb;61(2):243-244.

Zlotta AR, Egawa S, Pushkar D, Govorov A, Kuk C, Kovylina M, Aldaoud N, Fleshner NE, Finelli A, Lockwood G, van der Kwast TH. Prevalence of prostate carcinoma and its precursor lesions in russian caucasian and japanese men in autopsy specimens. J Urol Suppl: 2012: 187 (4): e65-e66

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**Zlotta AR, Nam RK.** To biopsy or not to biopsy--thou shall think twice. Eur Urol: 2012 Jun; 61(6):1115-1117.

Zlotta AR, Roumeguere T, Kuk C, Alkhateeb S, Rorive S, Lemy A, van der Kwast TH, Fleshner NE, Jewett MA, Finelli A, Schulman C, Lotan Y, Shariat SF, Nortier J. Select Screening in a Specific High-Risk Population of Patients Suggests a Stage Migration Toward Detection of Non-Muscle-Invasive Bladder Cancer. Eur Urol: 2011;59(6):1026-1031.

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#### **INVITED VISITS**

**Jarvi K:** Canadian Fertility and Andrology Society, Toronto, Ontario, Canada, 22 September 2011. Chair: CFAS Annual Meeting: Clinical I, Scientific Session.

Jarvi K: Ferring International, Miami, Florida, United States, 30 January 2012. Invited Speaker: Hypogonadism.

**Jarvi K:** EMD Serono, King City, Ontario, Canada, 2 June 2012. Invited Lecturer: Work-up of male infertility. refine, GREI (Gynecologic Reproductive Endocrinology and Infertility) Fellows' Review & Development Program.

Jarvi K: Canadian Urological Association, Banff, Alberta, Canada, 25 June 2012. Invited Lecturer:



Male Infertility: The Canary in the Coal Mine Male Infertility Is a Marker for Men's Health: Past, Present and Future.

Zlotta A: European Association of Urology (EAU), Vienna, Austria, 2011. Invited Speaker: Could screening for bladder cancer produce a stage migration towards detection of non-muscle-invasive

Zlotta A: Clinica Alemana, Santiago, Chile, 01 August 2011. Invited Professor.

Zlotta A: Sociedad Chilena De Urologia, San Pedro de Atacama, Chile, 26 August 2011. Invited Professor: August 26 - August 27, 2011.

Zlotta A: European Multidisciplinary Cancer Congress, Stockholm, Sweden, 25 September 2011. Speaker: Debate: This house believes that surgery is the mainstay for the treatment of pT2 bladder cancer.

Zlotta A: Update in Bladder Cancer - Erasme Hospital, Brussels, Belgium, 26-27 October 2011. Speaker: (1) Urine Markers for Detection and Surveillance of Non-Muscle-Invasive Bladder Cancer. (2) What is the future of Virtual Cystoscopy in Urology? (3) Select Screening in a Specific High-Risk Population of Patients Suggests a stage migration toward Detection of Non-Muscle-Invasive Bladder Cancer.

Zlotta A: SUGOG, Madrid, Spain, 10 November 2011. Speaker: Optimal timing of radical cystectomy in T1 high-grade bladder cancer.

Zlotta A: European Association of Urology, Paris, France, 26 February 2012. Chair: Abstract Session: Nerve-sparing radical prostatectomy and hormonal issues.

Zlotta A: 7th Engadin Prostate Cancer Winter Symposium, Zuoz, Switzerland, 15 March 2012. Presenter: A prospective international study on the prevalence of prostate cancer on autopsy in Caucasian and Asian men.

Zlotta A: American Urological Association (AUA), Atlanta, Georgia, United States, 15 May 2012. Moderator: Poster Session: Prostate Cancer Localized VII.

#### **RESEARCH AND INVESTIGATIONS**

A Novel Testicular Germ Cell Maturation Model for Fertility Preservation in Pre - pubertal Cancer Patients and Studies of Gonadotoxic Agents. McKerlie C, Jarvi K, Mullen B, Lo KC-L: National Institutes of Health (NIH) (USA). (\$723,516 2010 - 2013).

A proteomic and genetic biomarker panel for improving prostate specific antigen performance and identify individuals at risk of prostate cancer using a unique patient population accrued in the European Randomized Study for Prostate Cancer Screening. Zlotta A, Diamandis E, Fleshner N, Jarvi K, Lockwood G, Ozcelik H, van der Kwast T, Jarvi K: Ontario Institute for Cancer Research, Cancer Research Fund. (\$631,232 2009 - 2012).

Discovery of genetic abnormalities associated with male infertility. Jarvi K, Kolomietz E, Lo K, Grober E: McLaughlin Centre, University of Toronto, Accelerator Grant. (\$50,000 2012 - 2013).

Establishing a biological network strategy for personalizing cancer diagnosis, prognosis and drug development using genitourinary cancer as a model. Wrana I, Zlotta A, van der Kwast T, Azar A: Canadian Cancer Society, Innovation Grant. (\$199,680 2012 - 2014).

Genetic, epigenetic and proteomic analysis of the kallikrein family in search for novel diagnostic, prognostic and risk susceptibility algorithms for prostate cancer. Diamandis E, Zlotta A, Bapat B, Briollais L, Fleshner N, Ozcelik H, Van der Kwast T, Jarvi K: Canadian Institutes of Health Research (CIHR). (\$599,728 2009 - 2012).

Investigation of DNA methylation markers for improved prediction of aggressive disease in prostate cancer patients. Bapat B, van der Kwast T, Fleshner N, Klotz L, Venkateswaran V, Vesprini D, Lockwood G, Zlotta A: Prostate Cancer Research Foundation of Canada/Prostate Cancer Canada (PCC), Pilot Grant Program. (\$120,000 2011 - 2013).

Investigation of meiotic defects in infertile men undergoing assisted reproductive technologies. Ma S, Brown CJ, Lo KC-L: Canadian Institutes of Health Research (CIHR). (\$342,369 2009 - 2012).

Novel semen biomarkers to identify sperm production in men with infertility: A non - invasive method to characterize men with azoospermia or no sperm in the semen, into those with and without testicular sperm production. Jarvi K, Diamandis EP, Grober G, Mullen B, Briollais L: Lo KC-L. Canadian Institutes of Health Research (CIHR). (\$152,499 2011 - 2012).

Semen Proteomics to Identify Novel Prostate Cancer Biomarkers. Jarvi K, Diamandis E, Finelli A, Fleshner N, Zlotta A: Canadian Cancer Society, Research Institute. (\$413,853 2010 - 2013).



Towards non - invasive diagnosis of urogenital diseases by a novel multiparametric biomarker panel in seminal plasma. Diamandis EP, Jarvi K: Institut Merieux. (\$402,000 2010 - 2012).

Semen Proteomics - discovery of prostate cancer biomarkers. Kirk L, Jarvi K, Diamandis E: cy pres, Judgement of the Honourable Mr. Justice John Brockenshire. (\$600,000 2010 - 2014).

#### **HONOURS RECEIVED**

Zlotta A: Basic Science Research Award, University of Toronto/2011 Charles J. Robson Research Day, Canada. Associated with (mentor) Basic Science Research Award - 1st Prize. 2011.

Zlotta A: EAU Platinum Award 2012, European Association of Urology/European Urology, Paris, France.

Zlotta A: Best Poster Award, European Association of Urology, Paris, France. 2012.



University of Toronto | Department of Surgery



# St. Joseph's Health Centre

Lloyd Smith Surgeon-in-Chief

#### **HEADS OF DIVISION**

Dr. C. Compeau General and Thoracic Surgery

Dr. G. Vincent Orthopaedis

Dr. L. Kasrai Plastic and Reconstructive Surgery

Dr. U. Jain Urology

This year has been very challenging in the Department of Surgery here at St. Joseph's Health Centre. Increasing costs of technology and frozen hospital budgets have made it difficult to continue to provide "state of the art" surgical care.

There were no new recruitments or retirement in our department this year. However, because of workload issues in Orthopedics we were given permission to hire a new orthopedic surgeon. The search process is ongoing.

Dr Smith finished his 10 year term as Chief of Surgery and Medical Program Director in March. He will stay on as interim until a new Chief is selected.

The Department has been very successful in achieving our targets for funded cases in Orthopedics, Cancer care, and Bariatrics. In Hepatobiliary surgery our group was awarded an extra 30 cases by CCO because of increasing volumes. In Orthopedics the hospital paid for cases above the number allocated by the Ministry in order to help deal with excessive wait times.

The surgeons of the surgical program look forward to the future where we will continue to focus on excellence of clinical care, quality, and teaching.



University of Toronto | Department of Surgery 2011-2012 Annual Report | **100** 



# Division of General Surgery

Dr. C. Compeau Assistant Professor (Division Head)

Dr. T.A. Harmantas Assistant Professor

Dr. R.S. Hart Lecturer

**Assistant Professor** Dr. S. Jayaraman

Dr. D.R. Lindsay Lecturer

Dr. L.C. Smith Associate Professor

Dr. P.A. Sullivan Lecturer

#### **INVITED VISITS:**

Smith, L: Current Management Ventral Hernias, Southlake Hospital, February 28, 2012;

# Division of Orthopaedics

Dr. W.A. ElMaraghy Assistant Professor

Dr. M. Kliman Lecturer

Dr. M. Roscoe **Assistant Professor** 

Dr. G. Vincent Assistant Professor (Division Head)

Dr. M. Wood Lecturer

#### **PUBLICATIONS:**

ElMaraghy AW, Devereaux MW: A systematic review and comprehensive classification of pectoralis major tears. Journal of Shoulder and Elbow Surgery: 21(3): 412-22, 2012.

#### **HONOURS RECEIVED**

Vincent G: Queen Elizabeth II Diamond Jubilee Medal, 2012.



38 Gallie Day Gala Dinner: Dean Whiteseide, Darina Landa, James Rutka.



# Division of Plastic Surgery and Reconstructive Surgery

Dr. C. Fielding Lecturer

Dr. L. Kasrai Assistant Professor (Division Head)

Dr. R.H. Levine Professor

Dr. R.K. Wanzel Assistant Professor

#### **PUBLICATIONS:**

Kasrai L, Fisher DM: Strategies for reducing complications in autologous auricular reconstruction. Canadian Society of Plastic Surgeons, Toronto, Ontario. Canadian Journal of Plastic Surgery: 20(2): 134, 2012.

Wanzel K, Izadpanah A: Late Presentation of a Complex Thumb Metacarpal Phalangeal Joint Dislocation: A Case Report and Review of the Literature. Canadian Journal of Plastic Surgery: 19(4): 139-142, 2011.

Wanzel KR, Al-Rasheed T: Resident Burnout Amongst Plastic Surgery Residents Across Canada. Canadian Society of Plastic Surgery, Quebec City. Canadian Journal of Plastis Surgery 2011: 26:

Wanzel KR, Al-Qatani: Quality of Life for Facial Re-Animation Patients: A Cross Canada Survey. Canadian Society of Plastic Surgery, Toronto. Canadian Journal of Plastis Surgery: 26: 222, 2012.

#### **INVITED VISITS:**

Kasrai L: 5th International Congress on Auricular Reconstruction, Sydney, Australia, Mar 11, 2012. Invited Guest Speaker & International Organising Committee/ Strategies for reducing complications in autologous auricular reconstruction.

#### **AWARDS:**

Wanzel KR: Arnis Freiberg Award for Best Clinical Teacher (Division of Plastic Surgery, University of Toronto). 2011

# **Division of Thoracic Surgery**

Dr. M. Blitz **Assistant Professor** 

Dr. C. Compeau Assistant Professor (Division Head)

Dr. M. Ko **Assistant Professor** 

# **Division of Urology**

Dr. A. Chawla

Dr. U. Jain Lecturer (Division Head)

Dr. A Marcuzzi Lecturer Dr. A. McLean Lecturer



# St. Michael's Hospital

Ori D. Rotstein MD, Surgeon in-Chief/Robert B. Salter Chair in Surgical Research

#### **HEADS OF DIVISIONS**

Dr. D. Latter Cardio Surgery
Dr. A. Nathens General Surgery
Dr. R. L. Macdonald Neurosurgery
Dr. E. Schemitsch Orthopaedics

Dr. J. Mahoney Plastic and Reconstructive Surgery

Dr. K. Pace Urology

Dr. O. Rotstein (Interim) Vascular Surgery

The 2011-2012 year was a busy one at St. Michael's Hospital. The announcement of a new 17 floor state-of-the-art Patient Care Tower was enthusiastically received by all at St. Michael's Hospital, and especially by the members of our Department. An expanded "state-of-the art"- Emergency Room, a refurbished Med-Surg ICU and the building of new operating rooms including 5 hybrid rooms will enhance our ability to provide excellent care to our patients.

After much anticipation, Mr. Li Ka-shing attended the official opening of the Li Ka Shing Knowledge Institute made up of the Keenan Research Centre and the Li Ka Shing International Healthcare and Education Centre. He had the opportunity to see firsthand, his vision of supporting research, education and patient care. Several of our Department members moved their research groups into the new facility and are reaping the benefits of enhanced collaborations.

There have been a few changes and new faces in our seven surgical divisions. Dr. Kenneth Pace was appointed to the position as Division Head, Division of Urology on March 1, 2012. He is following in the footsteps of Dr. John Honey who stepped down from the position after more than a decade in the position. Many thanks to John for his excellent leadership, including his ability to attract funds for the first surgical robot at the University. We look forward to Dr. Pace's contributions in his new role. Dr. Jason Lee joined the Division of Urology in January 2012. He completed a Minimally Invasive Urology Surgery Fellowship at the Surgical Education Centre, University of California after graduating from the University of Toronto. Dr. Lee's research focus is in education, particularly in the field of simulation and his clinical work focuses on endourology, peritoneal dialysis access and robotics. Dr. Mark Wheatcroft joined the Division of Vascular

Surgery in June 2012 following his training in the United Kingdom. His clinical focus is endovascular therapy with a research interest in the arterial response to injury, specifically neointimal hyperplasia. Dr. Michael Ameli officially retired in June. Dr. Ameli held the role of Division Head in Vascular Surgery at the Wellesley Hospital from 1991- 1998 and again from 1998-2009 after the amalgamation of the Wellesley Hospital to St. Michael's Hospital. Dr. Lossing also announced he will be taking on a position at Southlake Hospital in September 2012. Despite his new location, he will continue to collaborate closely with the Vascular Surgery Division at the hospital.

Our Annual Physician Education Awards ceremony was held in June. Dr. Michael Cusimano was awarded the Donald J. Currie Award for undergraduate teaching; Dr. Vern Campbell won the William Horsey Award for his contributions to postgraduate teaching, and Dr. John Marshall won the Jameel Ali Award for Continuing Education in Surgery. The Squires Hyland Trust Dinner was hosted by our Department this year. Dr. Richard Reznick, Dean of Queen's University and former Chair of our Department was the Plenary lecturer. Dr. Nancy Baxter was awarded the James Waddell Mentorship Award for her extraordinary contribution to the mentorship of junior faculty members.

Internationally, Dr. Lee Errett has been recognized for his work with China through the awarding of an Honorary Chair at the Shandong Cardiac Research Centre and also an Honorary Professorship at the Second Military University in Shanghai. Dr. Emil Schemitsch held the position of President of the Canadian Orthopedics Association and spent much of his year representing our country at conferences around the world.

Dr. Subodh Verma and Dr. Avery Nathens successfully renewed their Canada Research Chairs. Dr. John Marshall continued to play an important role in clinical research in the area of critical care through his position as Chair of the Canadian Critical Care Trials Group.

University of Toronto | Department of Surgery 2011-2012 Annual Report | **103** 



# **Division of Cardiac Surgery**

Dr. D. Bonneau Associate Professor

Dr. L.E. Errett Professor

Dr. D.A. Latter Associate Professor (Division Head)

Dr. M. Peterson Assistant Professor Dr. S. Verma Associate Professor

#### **PUBLICATIONS**

Al-Mubarak HA, Alamri TM, Aljabab SA, Atteya M, Quan A, Teoh H, Shukla PC, Verma S, Aldahmash A, Aljabri B, Napoli C, Al-Omran, M. Effects on duration of post-operative ischemia and patterns of blood flow recovery in different conditions of mouse hind limb ischemia. Vasc Cell: 2011; 3:14-18.

Al-Omran, M, Verma, S, Lindsay, TF. Suboptimal use of risk reduction therapy in peripheral arterial disease patients at a major teaching hospital. Ann Saudi Med: 2011; 31:371-374.

Anderson TJ, Charbonneau F, Title LM, Buithieu J, Rose MS, Conradson H, Hildebrand K, Fung M, Verma S, Lonn EM. Microvascular function predicts cardiovascular events in primary prevention. Long-term results from the Firefighters And Their Endothelium (FATE) study. Circulation: 2011; 123:163-169.

Gupta M, Singh N, Tsigoulis M, Kajil M, Hirjikaka S, Quan A, Teoh H, Verma S. Perceptions of Canadian Primary Care Physicians Towards Cardiovascular Risk Assessment and Lipid Management. Can J Cardiol: 2012; 28(1):14-19.

Leiter LA, Fitchett DH, Gilbert RE, Gupta M, Mancini GBI, McFarlane PA, Ross R, Teoh H, Verma S, Anand S, Camelon K, Chow C-M, Cox, JL, Després J-P Genest J, Harris SB, Lau DCW, Lewanczuk R, Liu PP, Lonn EM, McPherson R, Poirier P, Qaadri S, Rabasa-Lhoret R, Rabkin SW, Sharma AM, Steele AW, Stone JA, Tardiff J-C, Tobe S, Ur E. Identification and management of cardiometabolic risk in Canada: a position paper by the Cardiometabolic Risk Working Group (Executive Summary). Can J Cardiol: 2011; 27(2):124-131.

Martin BJ, Verma S, Charbonneau F, Title LM, Lonn EM, Anderson TJ. The Relationship Between Anthropometric Indexes of Adiposity and Vascular Function in the FATE Cohort. Obesity: 2012 May; E-pub ahead of print.

Patel HJ, Myrmel T, Fattori R, Montgomery DG, Greason K, Pape L, Hughes GC, Peterson M, Trimarchi S, Deeb GM, Teman N, Isselbacher EM, Nienaber CA, Eagle KA, Froehlich JB. Acute Renal Failure and its Early and Late Implications in Acute Aortic Dissection: The IRAD Experience. J Am Coll Cardiol: 2012;59(13s1):E1921-E1921. doi:10.1016/S0735-1097(12)61922-6. 2012.

Peterson MD, Haapala HJ, Hurvitz EA. Predictors of cardiometabolic risk among adults with cerebral palsy. Arch Phys Med Rehabil: 2012 May; 93(5):816-821.

Shukla PC, Singh KK, Quan A, Al-Omran M, Teoh H, Lovren F, Cao L, Rovira II, Pan Y, Brezden-Masley C, Yanagawa B, Gupta A, Deng C-X, Coles JG, Leong-Poi H, Stanford WL, Parker TG, Schneider MD, Finkel T, Verma, S. BRCA1 is an essential regulator of cardiac function and survival following myocardial infarction. Nature Communications: 2011; 2:593.

Singh KK, Shukla PC, Quan A, Desjardins J-F, Lovren F, Pan Y, Garg V, Gosal S, Garg A, Szmitko PE, Schneider MD, Parker TG, Stanford WL, Leong-Poi H, Teoh H, Al-Omran, M, Verma S. BRCA2 deficiency exaggerates doxorubicin induced cardiac failure. J Biol Chem: 2012; 287: 6604-6614.

Singh KK, Shukla PC, Quan A, Lovren F, Pan Y, Wolfstadt JI, Gupta M, Al-Omran, M, Leong-Poi H, Teoh H, Verma S. Herceptin, a recombinant humanized anti-ERBB2 monoclonal antibody, induces cardiomyocyte death. Biochem Biophys Res Commun: 2011; 411: 421-6.



Suzuki T, Isselbacher EM, Nienaber CA, Pyeritz RE, Eagle KA, Tsai TT, Cooper JV, Januzzi JL Jr, Braverman AC, Montgomery DG, Fattori R, Pape L, Harris KM, Booher A, Oh JK, Peterson M, Ramanath VS, Froehlich JB. Type-selective benefits of medications in treatment of acute aortic dissection (from the International Registry of Acute Aortic Dissection [IRAD]). American Journal of Cardiology: 2012 Jan; 109(1):122-127.

Tu JV, Ko DT, Guo H, Richards JA, Walton N, Natarajan M, Wijeysundera HC, So D, Latter DA, Feindel CM, Kingsbury K, Cohen EA. Determinants of variations in coronary revascularization practices. Canadian Medical Association Journal: 2012 Feb; 184(2):179.

Verma S, Gupta M, Holmes DT, Xu L, Teoh H, Gupta S, Yusuf S, Lonn EM. Plasma renin activity predicts cardiovascular events and mortality in the Heart Outcomes Prevention Evaluation (HOPE) Study. Eur Heart J: 2011; 32(17): 2135-2142.

Yingming A. Chen, Subodh B. Joshi, Andrew M. Crean, Andrew T. Yan, David A. Latter, Laura Jimenez-Juan, Anish Kirpalani. Persistent Left Superior Vena Cava With Retrograde Drainage From the Left Atrium Into the Left Brachiocephalic Vein. Journal of the American College of Cardiology: 2011; 58(20).

#### **INVITED VISITS**

Bonneau D: Paris, France, December 2011. Invited Lecturer: Valve Repair.

Errett LE: The Shandong Engineering Research Center for Heart Transplant and Material, Shandong Provincial Qianfoshan Hospital, Jinan, Shandong, China, 16 November 2011. Invited Lecturer: Percutaneous AV replacement (Hybrid Procedure).

Errett LE: The Toronto Lawn & Tennis Club with Heart and Stroke Foundation, Toronto, Ontario, Canada, 4 April 2012. Invited Speaker: CAD: A different perspective.

Latter DA: 1er Simposio Cirugia Cardiovascular y Cardiologia, Caracas, Venezuela, Bolivarian Republic Of, 28 October 2011. Invited Lecturer: Mitral Valve Surgery.

Latter DA: Rouge Valley Hospital, Toronto, Ontario, Canada, 20 December 2011. Invited Lecturer: Mitral Valve Repair Lecture on Mitral Valve Repair to Cardiologist at Rouge Valley Health System.

Peterson M: Winnipeg International Heart Conference, Winnipeg, Manitoba, Canada, 15 October 2011. Invited Speaker: Transcatheter Aortic Valve Replacement: Is the Technology Ready for Prime

Peterson M: Rouge Valley Centenary: Cardiology Grand Rounds, Scarborough, Ontario, Canada, 24 January 2012. Invited Speaker: Transcatheter Aortic Valve Replacement: Is the Technology Ready for Prime Time?

Peterson M: Heart School 2011-2012, Scarborough, Ontario, Canada, 3 February 2012. Speaker: "TEVAR & Hybrid Techniques" & Sas "advancements in hybrid techniques".

Peterson M: Lakeridge Health Oshawa, Oshawa, Ontario, Canada, 21 February 2012. Invited Speaker: New Frontiers in Cardiovascular Surgery: Transcatheter Aortic Valve Implantation and Endovascular Aortic Surgery.

Peterson M: The Scarborough Hospital, Scarborough, Ontario, Canada, 2 March 2012. Invited Speaker: New Frontiers in Cardiovascular Surgery: Transcatheter Aortic Valve Implantation and Endovascular Aortic Surgery.

Peterson M: Journal Club, St. Mary's Hospital, Cambridge, Ontario, Canada, 19 April 2012. Invited Speaker: Acute Aortic Syndromes: What we don't know will hurt them.

Peterson M: Aortic Surgery Symposioum, New York, New York, United States, 26 April 2012. Presenter: Outcomes Following Repair for Acute Type A Dissection are Independent of Cannulation Strategy: Femoral vs. Right Axillary Artery.

Verma S: Canadian Cardiovascular Congress, Vancouver, British Columbia, Canada, 2011. Cardiac-specific disruption of BRCA2 results in higher doxorubicin sensitivity and heart failure with advanced age.

#### RESEARCH AND INVESTIGATIONS

DJ-1 in Signalling in Human Cardiac Ischemia Reperfusion. Yanagawa B, Verma S: Physicians Services Incorporated Foundation (The) (PSI). (\$20,000 2010 -2012).

Elucidating the in vivo role of Adiponectin in inflammation: A Biochemical and Pharmacological Approach. Verma S: Heart and Stroke Foundation of Canada (HSFC), Operating Grant. (\$197,962 2009) -2012).



Li Ka Shing Collaborative program. Verma S, Slutsky A, Mamdani M: Li Ka Shing Collaborative program. (\$3,000,000 2009 - 2012).

Role of the Tumor Suppressor Gene BRCA1 in Adverse Cardiac Remodeling. Verma S, Parker TG: Canadian Institutes of Health Research (CIHR), Operating Grant. (\$330,367 2009 -2012).

Surgical and Pharmacological novel interventions to Improve Overall Results of Saphenous Vein Graft Patency in Coronary Artery Bypass Grafting surgery: An International Multicentre Randomized Controlled Clinical Trial (SUPERIOR SVG PATENCY CABG Trial). Fremes S, Dashwood MR, Fedak PWM, Kachel E, Verma S: Heart and Stroke Foundation of Canada (HSFC), Operating Grant. (\$497,540 2010 -2015).

Zebrafish Centre for Advanced Drug Discovery: A High Throughput Screening Platform Targeting Cardiovascular Diseases. Wen X-Y, Verma S, Marsden PA: Canada Foundation for Innovation (CFI), Leaders Opportunity Fund. (\$794,217 2010 -2014).

#### **HONOURS RECEIVED**

Verma S: Male Professional of the Year Award, Indo-Canada Chamber of Commerce, Canada, 2011.



## Division of General Surgery

Dr. N. Ahmed Associate Professor

Dr. J. Ali Professor

Dr. N. Baxter Associate Professor

Dr. J.M.A. Bohnen Professor

Dr. M.J. Burnstein Associate Professor Dr. R. George Associate Professor Associate Professor Dr. T. Grantcharov

Dr. A. Kapus Professor

Dr. S. Kitto **Assistant Professor** Dr. J. Koo Associate Professor Dr. W. Kuebler Associate Professor Dr. B. Lawless **Assistant Professor** Dr. J.C. Marshall Professor Dr. R. Mustard Associate Professor Dr. A.B. Nathens Professor (Division Head)

Dr. O. Rotstein Professor

Dr. K. Szaszi **Assistant Professor** 

#### **PUBLICATIONS**

Aggarwal R, Grantcharov T. Education, innovation and safe practice in surgical oncology. Surg Oncol: 2011 Sep; 20(3):127-128.

Ahn H, Singh J, Nathens A, MacDonald RD, Travers A, Tallon J, Fehlings MG, Yee A. Prehospital care management of a potential spinal cord injured patient: a systematic review of the literature and evidence-based guidelines. J Neurotrauma: 2011 Aug; 28(8):1341-1361.

Ali J. Advanced Trauma Life Support. Encyclopedia of Intensive Care Medicine Part 1: Jean-Louis Vincent, Jesse P. Hall Springer Verlag Publisher, 112-120. 1 May 2012.

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Armstrong SM, Khajoee V, Wang C, Wang T, Tigdi J, Yin J, Kuebler WM, Guthrie M, Davis SP, Ho M, Lee WL. Co-regulation of transcellular and paracellular leak across microvascular endothelium by dynamin and rac. American Journal of Pathology: 2012 Mar; 180(3):1308-1323.

Bahrami P, Shwiezer TA, Tam F, Grantcharov TP, Cusimano MD, Graham SJ. Functional MRI-compatible laparoscopic surgery training simulator. Magn Reson Med: 2011; 65(3):873-881.



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- Burns KEA, Chant C, Smith O, Cuthbertson B, Fowler R, Cook DJ, Kruger P, Webb S, Alhashemi J, Dominguez-Cherit G, Zala C, Rubenfeld GD, Marshall JC. A Canadian Critical Care Trials Group project in collaboration with the international forum for acute care trialists - Collaborative H1N1 Adjuvant Treatment pilot trial (CHAT): study protocol and design of a randomized controlled trial. Trials: 2011;12(1):70.
- Casserly B, Gerlach, H, Philips G, Marshall JC, Levy M. Evaluating the use of recombinant human Activated Protein C (rhAPC) in adult severe sepsis: Results of the Surviving Sepsis Campaign (SSC). Critical Care Medicine: 2012 May; 40(5):1417-1426.
- Chant C, Smith OM, Marshall JC, Friedrich JO. Relationship of catheter-associated urinary tract infection to mortality and length of stay in critically ill patients: A systematic review and meta-analysis of observational studies. Critical Care Medicine: 2011: 39(5):1167-1173.
- Charbonney E, Li Y, Klein D, Romaschin A, Nathens AB, Marshall JC. Systemic endotoxemia following multiple trauma is associated with early shock and predicts subsequent mortality. Surgical Infections: 2011: 12 Suppl 1: S28.
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- Crochet P, Aggarwal R, Dubb S, Ziprin P, Rajaretnam N, Grantcharov TP, Ericsson KA, Darzi A. Deliberate practice on virtual reality laparoscopic simulator enhances the quality of surgical technical skills. Annals of Surgery: 2011; 253(6):1216-1222.
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### **INVITED VISITS**

#### **Abstracts and Other Papers**

Ali J: American College of Surgeons, St. John, New Brunswick, Canada, 26-27 August 2011. (1) National Educator: Advanced Trauma Life Support (ATLS) (2) Instructor Course. Educator: Rural Trauma Team Development (RTTDC) Course.

Ali J: American College of Surgeons, Hamitlon, Ontario, Canada, 16 September 2011. National Educator: Advanced Trauma Life Support (ATLS) Instructor Course.

Ali J: American College of Surgeons, Haliburton, Ontario, Canada, 7 October 2011. Lecturer: Rural Trauma Team Development (RTTDC) Provider Course.

Ali J: American College of Surgeons, Winnipeg, Manitoba, Canada, 14 October 2011. National Educator: Advanced Trauma Life Support (ATLS) Instructor Course.

Ali J: American College of Surgeons, Tehran, Iran, Islamic Republic Of, 2 December 2011. National Educator: Advanced Trauma Life Support (ATLS) Program - Instructor Course.

Ali J: American College of Surgeons, Winnipeg, Manitoba, Canada, 9 December 2011. National Educator: Advanced Trauma Life Support (ATLS) Instructor Course.

Ali J: American College of Surgeons, Trinidad And Tobago, 12 January 2012. National Educator: Prehospital Trauma Life Support Instructor Course.

Ali J: American College of Surgeons, St. George's University, Grenada, 13-16 January 2012. National Educator: (1) Advanced Trauma Life Support (ATLS) Program. (2) Prehospital Trauma Life Support (PHTLS) Program.

Ali J: Annual Conference of Advanced Trauma Life Support Middle East and North Africa (MENA), United Arab Emirates, 14 March 2012. (1) Invited Speaker: Why should we learn and teach ATLS? (2) Moderator: Trauma Systems Developments in MENA. (3) Chair: Instructor's Workshop. (4) Lecturer: End Point in Resuscitation Anything New. (5) Moderator: Case Discussion.

Ali J: National Educator. American College of Surgeons, Abu Z, aby [Abu Dhabi], 16 March 2012. Lecturer: Advanced Trauma Life Support (ATLS) Course - Instructor Course.

Ali J: Trauma Association of Canada, India, 12 April 2012. Visiting Professor: Rural Trauma Team Development (RTTDC) Course in India.

Burnstein MJ: Universided Catolica de Chile, Chile, 17 November 2011. Invited Speaker: (1) Diverticulitis. (2) Local Treatment of Rectal Cancer.

Burnstein MJ: LXXXIV Congress of the Chilean Society of Surgery, Chile, 21 November 2011. Invited Speaker: (1) Perineal Approaches to Rectal Prolapse. (2) Operative Treatment of Acute Colitis.

George R: Ontario, Canada, 2011. CIBC Breast Centre Annual Report 2010-2011.

George R: Organ Imaging Review, Toronto, Ontario, Canada, 11 September 2011. Presenter: Nodal Imaging and the Sentinel Node.

George R: Toronto Cancer Symposium, Toronto, Ontario, Canada, 24-25 October 2011. Invited Speaker and Chair: (1) Breast Cancer: Improving Cosmesis, maintaining margins. (2) Managing the Axilla with a positive Sentinel Node.

George R: CME event at Southlake Regional Health Centre, Ontario, Canada, 26 October 2011. Preventing Breast Cancer: Risk Assessment and Risk Reduction.

George R: 85th Annual Dalhousie Refresher course, Halifax, Nova Scotia, Canada, 1 December 2011. Invited Speaker: Management of the axilla post Z-11.

George R: Venus Today Magazine, Canada, 14 December 2011. Interview: Breast Cancer and

George R: Thunder Bay Regional Hospital, Thunder Bay, Canada, 2 March 2012. Invited Speaker: (1) Sentinel Node Biopsy and completion dissection, re-evaluating in light of recent data. (2) Difficult Breast Cases: Problems for Discussion.

George R: Ontario, Canada, 20 April 2012. Invited Speaker: Approach to Cancer in the Elderly.

George R: Ontario Breast Screening Program, 2012. Press Release.



Grantcharov T: Canadian Surgical Forum, London, Ontario, Canada, September 2011. Competency based training in General Surgery.

Grantcharov T: 24th International Course on Therapeutic Endoscopy, Toronto, Ontario, Canada, 14 October 2011. Surgical management of morbid obesity.

Grantcharov T: The Southwestern Ontario Surgical Association, London, Ontario, Canada, 18 November 2011. New Clinical Applications for the Fast track surgery concept.

Grantcharov T: Fundamentals of Robotic Surgery Consensus Conference, Celebration, Florida, United States, 28 April 2012. Principles of training curriculum design and validation.

Kuebler W: European Society of Cardiology, Paris, France, August 2011. Gaps in the vessel wall: connexins in vascular disease - Pulmonary hypertension.

Kuebler W: European Conference for Microcirculation, Munich, Germany, October 2011. (1) Regulation of vascular permeability by sphingolipids. (2) TRPC and TRPV channels as critical regulators of vascular permeability.

Kuebler W: Ludwig-Boltzmann-Institute for Pulmonary Vascular Research, Graz, Austria, November 2011. Pulmonary hypertension with left heart disease - pathomechanisms and treatment strategies.

Lawless B: Ontario Ministry of Health and Long-Term Care, Critical Care Secretariat, Toronto, Ontario, Canada, 19 September 2011. Invited Speaker: (1) An Evolution of Ontario's Critical Care Strategy. (2) An Evaluation of Ontario's Critical Care Reponse Teams.

Lawless B: Ontario Hospital Association, Toronto, Ontario, Canada, 4 October 2011. (1) Chair: Quality Improvement and Performance Measurement in Critical Care. (2) Invited Speaker: Quality Indicators in Critical Care: Ventilator Associated Pneumonia and Central Line Infections.

Lawless B: American Thoracic Society, San Francisco, California, United States, 20 May 2012. Speaker: Evaluation of Critical Care Response Teams: An End-user Perspective presentation of findings on evaluation of Critical Care Response Teams.

Marshall JC: XIV Foro Internacional de Medicina Crítica, Mexico City, Mexico, 8-10 July 2011. Invited Speaker: (1) PIRO: A staging system for critical illness. (2) Resuscitation and deresuscitation. (3) Damage control for the intensivist.

Marshall JC: 53rd Annual Meeting, Israeli Society of Critical Care Medicine, Nazareth, Israel, 14-16 July 2011. Invited Speaker: (1) The immune response in critical illness. (2) Principles of source control.

Marshall JC: COPICON Congress 2011, Durban, South Africa, 27-31 July 2011. Invited Speaker: (1) Critical illness is an iatrogenic state. (2) Apoptosis in the pathogenesis of critical illness.

Marshall JC: Weimar Sepsis Update 2011, Weimar, Germany, 7-10 September 2011. Invited Speaker: How do I treat sepsis in a surgical patient?

Marshall JC: 24th Annual Congress, European Society of Intensive Care Medicine, Berlin, Germany, 1-5 October 2011. Invited Speaker: (1) Building a research team. (2) Grant writing: What you should know. (3) The concept of run-in trials. (4) Care of the septic patient is best advanced by targeting the doctor.

Marshall JC: Sepsis 2011, Beijing, China, 27-28 October 2011. Invited Speaker: (1) Clinical trials in sepsis: A critique. (2) The role of the neutrophil. (3) The PROWESS Shock Trial.

Marshall JC: IX Congreso Panamericano e Ibérico de Medicina Crítica y Cuidado Intensivo, Cartegena, Colombia, Nov 30 - Dec 2 2011. Invited Speaker: (1) Host-microbial interactions in critical illness. (2) PIRO: A staging model for critical illness. (3) Damage control for the intensivist. (4) Resuscitation and deresuscitation. (5) InFACT: Global collaboration in critical care research.

Marshall JC: CIHR/ICRH Advisory Board Meeting, Kananaskis, Alberta, Canada, 11 January 2012. Invited Speaker: The Canadian Critical Care Trials Group.

Marshall JC: 2012 Emergency Preparedness and Response Forum, Public Health Agency of Canada, Edmonton, Alberta, Canada, 18 January 2012. Invited Speaker: Facilitating pandemic research in the sickest patients: Emerging global strategies.

Marshall JC: 32nd International Symposium of Intensive Care and Emergency Medicine, Brussels, Belgium, 20-23 March 2012. Invited Speaker: (1) Goal-directed deresuscitation. (2) After PROWESS-Shock: Implications for future studies. (3) Talactoferrin as a treatment for sepsis.

Marshall JC: 9th Annual Critical Care Symposium, Manchester, United Kingdom, 26-27 April 2012. Invited Speaker: (1) Source control in sepsis. (2) Industry-led trials are obsolete in the 21st century PRO. (3) Resuscitation and deresuscitation. (4) PIRO in 2012 - Where do we stand? (5) Management of severe pancreatitis.



Marshall JC: 10th Simposio Internacional Emergencias Médicas y Patiente Crítico, Santiago, Chile, 10-12 May 2012. Invited Speaker: (1) TNF as a target in sepsis. (2) Damage control for the intensivist. (3) Source control in complex infections. (4) Resuscitation and deresuscitation.

Marshall JC: 10th Greek Armed Forces Medical Corps Critical Care and Emergency Medicine Conference, Athens, Greece, 25-26 May 2012. Invited Speaker: (1) Critical illness is an iatrogenic disorder. (2) Empiric antibiotics in the critically ill: Results of the AATICC trial.

Marshall JC: 2nd Paris International Conference on Intensive Care, Société de Réanimation del la Langue Française, Paris, France, 7-8 June 2012. Invited Speaker: (1) Source control and Selective Decontamination of the Digestive Tract. (2) Activated protein C in septic shock: Results of the PROWESS-Shock study. (3) Intravenous immunoglobulins in sepsis.

Nathens AB: International Surgical Society, Yokohama, Japan, August 2011. Invited Speaker: ACS Trauma Quality Improvement Program.

Nathens AB: Western States Trauma Leadership Forum, Park City, Utah, United States, August 2011. Invited Speaker: ACS Trauma Quality Improvement Program.

Nathens AB: Japan Trauma DataBank (International Surgical Week), Tokyo, Japan, August 2011. Invited Speaker: Performance indicators in NTDB and TQIP.

Nathens AB: Department of Surgery, University of New Mexico, Albuquerque, New Mexico, United States, September 2011. Visiting Professor: Trauma Quality Improvement.

Nathens AB: University of London at Queen Mary, London, United Kingdom, September 2011. Invited Lecturer: Trauma Systems Trauma Systems.

Nathens AB: Ontario Association of General Surgeons, Toronto, Ontario, Canada, October 2011. Invited Speaker: Update in intra-abdominal infection.

Nathens AB: American College of Surgeons, San Francisco, California, United States, October 2011. Presenter: Sepsis - Update in Surgical Critical Care.

Nathens AB: Department of Surgery, Memorial University, St. John's, Canada, November 2011. Invited Speaker: Current Concepts in Intraabdominal Infection.

Nathens AB: American Burn Association - Burn Quality Consensus Conference, District of Columbia, United States, 7 February 2012. Invited Speaker: American College of Surgeons Trauma Quality Improvement Program.

Nathens AB: Trauma Association of Canada, Toronto, Ontario, Canada, April 2012. Invited Speaker: Overcoming the Challenges of Geography: Improving Access to Trauma Care.

Nathens AB: Asia-Pacific Trauma Quality Improvement Network, Kuala Lampur, Malaysia, 4 May 2012. Invited Speaker: Trauma Care Organization.

Nathens AB: CBC Radio One - Ontario Today, Toronto, Ontario, Canada, 16 May 2012. Interview: Ornge under fire after two deaths linked to delay.

Nathens AB: Toronto Star, Toronto, Ontario, Canada, 9 June 2012. Media interview: More patients should be sent to trauma centres, study finds.

Nathens AB: Toronto Star, Toronto, Ontario, Canada, 11 June 2012. Media interview: Ontario hospitals and EMS have what it takes when minutes matter.

Nathens AB: CBC Radio One, Toronto, Ontario, Canada, 13 June 2012. Presenter: Ontario Today Close enough to hospital if Ornge can't get you there?

Rotstein O: Canadian Surgery Forum, Canada, 16 September 2011. Chair: Surgical Intraabdominal Infections Guidelines: Applying a new Frame of Mind to Management Satellite Symposium.

Rotstein O: American College of Surgeons, San Francisco, California, United States, October 2011. Discussant: Critical Care III: Apoptosis is the Pathogenesis of Critical Illness 1) Hydrogen Sulfide Protects against Ischemia-Reperfusion Injury by Decreasing Neurophil-Mediated Tissue Damage. 2) TNF-Alpha Potentiates Dexamethasone-Induced Expression and Activity of C/EBP-Beta in Cultured Muscle Cells. (3) Invited Speaker: Evidenced Based Reviews in Surgery.

Rotstein O: Regional Surgeon Consultative Meeting, Toronto, Ontario, Canada, October 2011.

Rotstein O: Canadian Association of Gastoenterology and Canadian Association for the Study of the Liver, Montreal, Quebec, Canada, 24 February 2012. Invited Speaker: What's New in Acute Pancreatitis- Treatment, Nutrition, Genetics. CAGS/ CASL Postgraduate Course.

Rotstein O: Dalhousie University, Department of Surgery Research, Halifax, Nova Scotia, Canada, April 2012. Dr. Gordon Bethune Visiting Professor: Clinician Scientists: On the Verge of Extincton or on the Road to Recovery.



Rotstein O: Surgical Infection Society, Dallas, Texas, United States, April 2012. Moderator: Parallel Session I: Fundamental Mechanics.

### RESEARCH AND INVESTIGATIONS

A Pilot Project to Explore the Determinants of Knowledge Use in a Medical Education Context. Reeves S, Leslie K, Légaré F, Silver I, Rosenfield J, Hodges B, Curran V, Kitto S, Armson H: Knowledge Translation Canada, KT Canada Seed Funding Award. (\$30,000 2011 –2012).

Age of Blood evaluation (ABLE) Trial in the Resuscitation of Critically Ill Patients. *Lacroix J, Blajchman MA, Callum JL, Cook DJ, Fergusson DA, Hebert PC, Mcintyre LL, Skrobik Y, Tinmouth AT, Marshall JC: Canadian Institutes of Health Research (CIHR).* (\$1,040,668 2008 –2012).

Animals, Humans, and the Continuity of Evidence: A Study of Clinical Translation. Fergusson DA, Kimmelman J, Grimshaw JA, Hackam DG, Knoll G, London AJ, Moher D, Ramsay TO, Sampson M, Stewart DJ, Weijer CE, Marshall JC: Canadian Institutes of Health Research (CIHR). (\$273,952 2011 –2014).

Angiotensin(1-7) Signaling via the Mas Receptor Constitutes an Intrinsic Protective Pathway and a Novel Therapeutic Strategy in Acute Lung injury. *Kuebler W, Walther T. Ontario Thoracic Society.* (49,652 2010 - 2011).

Assessing the Quality of Colonoscopy: Validation of Quality Indicators. *Tinmouth J, Baxter N: Canadian Cancer Society Research Institute.* (\$165,863 2009 – present).

Cellular and Molecular Mechanisms of Prolonged Neutrophil-Mediated Inflammation in Trauma and Sepsis: The Role of PBEF/Nampt/Visfatin. *Marshall JC: The Physicians' Incorporated Foundation*. (\$169,500 2012 – 2014).

Characterization of a novel, caspase-8 dependent survival pathway in inflammatory neutrophils. *Marshall JC: Canadian Institutes of Health Research (CIHR).* (\$501,135 2009 -2014).

Clinical Practice Guidelines for Ventilator Associated Pneumonia. *Muscedere J, Sinuff T, Dodek P, Heyland D, Martin C, Cook D, Lawless B: CIHR.* (\$99,079 2011 -2012).

Colorectal cancer screening. Rabeneck L, Baxter N: Canadian Institutes of Health Research (CIHR), CIHR emerging team. (\$1,735,300 2008 - present).

Design and Validation of a Surgical Skills Assessment Tool for Laparoscopic Roux-en-Y Gastric Bypass. *Grantcharov T, Zevin B: University of Toronto, Education Development Fund.* (\$5,900 2011 – 2012).

Developing a Patient and Family-Centred Approach for Measuring the Quality of Trauma Care. Stelfox T, Nathens A: Canadian Institutes of Health Research (CIHR). (\$628,692 2011 -2015).

Development and Validations of a Curriculum for Laparoscopic Colorectal Surgery. *Grantcharov T: American Society of Colon & Rectal Surgeons.* (\$47,214 2012 – 2013).

Development of strategies to identify, analyze and prevent errors in the Operating Room - an interprofessional approach to enhancing technical and non-technical performance and improving patient safety. *Grantcharov T: St. Michael's Hospital Innovation Fund.* (\$100,000 2012).

Digestive tract in critically ill patients treated in the Intensive Care Unit (The SuDDICU study) PHASE 2- An exploratory study of the perceived risks, benefits and barriers to the use of SDD in Canadian critical care units. *Cuthbertson B, Marshall J: Canadian Institutes of Health Research*. (\$66,000 2010 – 2011).

Effective systems for procedure specific Health Care Simulation. *Grantcharov T: Ontario Research Fund (ORF).* (\$4,794,875.40 2011 –2016).

Establishment and maintenance of an educational program in simulation and minimally invasive surgery. *Grantcharov T: St. Michael's Hospital Foundation.* (\$4,000,000 2010 – 2019).

Establishment of a clinical centre for laparoscopic operating skills including tele-simulation and tele-mentoring capabilities. *Grantcharov T: St. Michael's Hospital Foundation.* (\$2,180,522 2011).

Evaluation of Future Learning Environments- How Space Impacts Learning. *Kitto S, Reeves S: Karolinska Institutet.* (\$22,000 2011 - 2012).

Fate-determining mechanisms in the epithelium during fibrogenesis: the role of cell contacts.. *Hinz B, Kapus A: Canadian Institutes of Health Research (CIHR).* (\$850,123 2010 –2015).

From Bench to Bedside to Curbside. Slustky AS, Dorian P, Morrison L, Spence J, Baker AJ, Levery J, Fowler R, Black S, Sibbald W, Redelmeier, Rotstein O: Heart and Stroke Foundation of Canada (HSFC). (\$1,500,000 2010 -2016).



From Bench to Bedside to Curbside. Slutsky AS, Dorian P, Morrison L, Spence J, Baker AJ, Levery J, Fowler R, Black S, Sibbald W, Redeimeier, Rotstein O: National Institutes of Health (NIH) (USA), Department of Health and Human Services. (\$648,000 USD 2010 -2016).

From Bench to Bedside to Curbside. Slutsky AS, Dorian P, Morrison L, Spence J, Baker AJ, Levery J, Fowler R, Black S, Sibbald W, Redeimeier, Rotstein O: Canadian Institutes of Health Research (CIHR). (\$1,057,000 2009 -2016).

From Data to Daily Practice: An Integrative Approach to Improving Trauma Centre Access in Rural Regions: Haas B, Gagliardi A, Nathens A: Canadian Institutes of Health Research (CIHR), Fellowship. (\$110,000 2010 -2012).

From NSQIP to TQIP - Trauma Quality Improvement Project. Shahid S, Nathens A: Agency for Healthcare Research and Quality (AHRQ) (formerly Agency for Health Care Policy and Research). (\$887,489 2009 -2012).

Hand Hygiene and Knowledge Translation: A merger of hand hygiene practices between 2 Bond and 7 CC North. Kitto S, Muller M, McKernan P, Hughes B, Straus S, Siddique N, Leung E: St. Michael's Hospital Quality Innovation Fund. (\$16,750 2011 - 2012).

Hand Hygiene Compliance. The Division of General Internal Medicine, Department of Risk Management & Quality Improvement and the Knowledge Translation Program. Kitto S, Yeung E, Reeves S: St. Michael's Hospital. (\$22,000 2011 - 2012).

HL-10-006 Toronto Regional Coordinating Center Clinical Research Consortium to Improve Resuscitation Outcomes. Morrison L, Baker A, Brooks S, Cheskes S, Craig A, Dainty K, Dorian P, Feldman M, Foeree R, Hutchinson J, Ferguson N, Laupacis A, MacDonald R, Mamdani M, Moran P, Nathens A, Needham D, Redelmeier D, Rizoli S, Rotstein O, Rubenfeld G, Scales D, Schull M, Schwartz B, Slutsky A, Spence J, Stuss D, Verbeek R, Wax R: National Institutes of Health (NIH) (USA). (\$1,009,800 2010 -2016).

How do cell contacts regulate the expression of their components? Szaszi K: Natural Sciences and Engineering Research Council of Canada (NSERC). (\$130,000 2012 -2017).

Improving Communication and Patient Safety in Trauma Patients Admitted to the Intensive Care Unit - A Pilot Feasibility Study. Zakrison TA, Nathens A, and Kitto S: Physicians Services Incorporated Foundation (The) (PSI). (\$12,197 2011 -2012).

Improving Patient Outcomes: Mapping practice boundaries and intersections between the domains of Continuing Education, Knowledge Translation, Patient Safety and Quality Improvement. Kitto S, Bell M, Reeves S, Sargeant J, Etchells E, Silver I: Association of Faculties of Medicine of Canada. (\$20,000 2011 -2012).

Improving Patient Transition from Acute Trauma Care Hospitalization: Identifying information and communication gaps during the discharge process. Nathens A, Bridge J: Ministry of Health and Long Term Care - Innovation Funding, MOHLTCl AHSC AFP Innovation Fund. (\$23,000 2011 -2013).

Knowledge translation of surgical innovations: Exploring development, implementation and evaluation of robotic and simulation training programs. Gagliardi A, Grantcharov T: CIHR Operating Grant. (\$60,000 2010 - 2011).

Making Handover Safer for our Trauma Patients - A grassroots approach to quality. Zakrison T. Nathens A, Leung E, Kitto S, McFarlan A, McCredie V, Campos ID, Baker A, Barratt L, Hicks C: St. Michael's Hospital, Quality Innovation Fund. (\$18,921.40 2011 - 2012).

Mast cells in vascular remodeling and pulmonary hypertension with left heart disease. Kuebler W, Semple JW, dos Santos CC, Jankowski J: Heart and Stroke Foundation of Ontario. (\$156,400 2010 -2012).

Mechanism of TNF-alpha-induced tubular injury: Rho-dependent disruption of the intercellular junctions. Szaszi K: Canadian Institutes of Health Research (CIHR), Operating Grant. (\$323,215 2009 -2012).

Mechanisms of macrophage priming for LPS signaling by oxidative stress. Rotstein O: Canadian Institutes of Health Research (CIHR). (\$713,605 2010 -2015).

Molecular and cellular mechanisms underlying chronic kidney disease. Szaszi K: Ontario Ministry of Research and Innovation (ON), Early Researcher Award. (\$100,000 2010 -2015).

Myocardin-related transcription factor: a central regulator of epithelial-myofibroblast transition. Kapus A: Canadian Institutes of Health Research (CIHR). (\$734,944 2008 -2013).

Myogenic program in the tubular epithelium: regulation of the stability of Myocardin-related transcription factor. Kapus A: Kidney Foundation of Canada (KFC). (\$100,000 2011 - 2013).

New concept of hypoxic pulmonary vasoconstriction: Conducted response via connexin 40. Kuebler W, Bolz SS, Olschewski A, Isakson B: Canadian Institutes of Health Research (CIHR). (\$380,316 2009 -2012)



Pandemic Preparedness in the Interpandemic Period: ISARIC, InFACT, and the Global Response to Emerging Infectious Disease Threats. Marshall JC, Heslegrave RJ, Halperin SA: Canadian Institutes of Health Research (CIHR), Planning Grants - Priority Announcement:Infection & Immunity. (\$25,000 2012 - 2013).

Physician leadership and engagement for health system improvement and accountability. Baker GR, Denis JL, Moore Hepburn C, Leblanc D, Pomey MA, Black C, Langley A, Lawless B: Canadian Institutes of Health Research (CIHR), Expedited Knowledge Synthesis. (\$83,463 2012).

Pressures on surgeons to 'measure up' and their effects on surgical judgment. Moulton CA, Murnaghan ML, Martimianakis MA, Kitto S: Physicians Services Incorporated Foundation (The) (PSI). (\$99,043 2011 -2013).

Providing Resources for Effective and Ethical Decisions In Critical Care Triage [PREEDICCT] study. Christian MD, Fisman DN, Fowler RA, Marshall JC, Zygun DA: Canadian Institutes of Health Research, Planning Grants, Priority Announcement: Infection & Immunity. (\$23,842 2011 -2012).

Qualitative Analysis of the HPB Community of Practice. Kitto S, Gallinger S, Moulton CA: University of Toronto. (\$26,500 2010 - 2012).

Regulation of vascular permeability by sphingolipids. Kuebler W, Uhlig S: German Research Foundation (Deutsche Forschungsgemeinschaft, Germany). (€145,000 2010 -2013).

Sepsis Outcomes National Registry to Improve Survival. Boyd J, Doig C, Hancock R, Kubes P, Russell J, Marshall J: Canadian Institutes of Health Research (CIHR), Network Catalyst Grant. (\$200,000 2011 - 2014).

Situational Awareness in Surgery: Evaluation and Training using lessons from the Aviation Industry. Sharma B, Grantcharov T: CIHR Frederick Banting and Charles Best Canada Graduate Scholarship for Master of Science Students. (\$17,500 2010 - 2011).

Strengthening the Sociological Fidelity of Interprofessional Team-based Simulation Scenarios: an empirical study. Reeves S, Boet S, Sharma S, Kitto S: University of Toronto. (\$4,995 2011 -2012).

Structures and Processes of Care in Colorectal Cancer Surgery. Urbach DR, Baxter N: Canadian *Institutes of Health Research (CIHR).* (\$1,047,225 2008 – 2013).

The efficacy, cost-effectiveness and ecological impact of Selective Decontamination of the Digestive tract in critically ill patients treated in the Intensive Care Unit (The SuDDICU study) PHASE 2 -An exploratory study of the perceived risks, benefits and barriers to the use of SDD in Canadian critical care units. Cuthbertson BH, Burns KEA, Cook DJ, Dodek PM, Ferguson ND, Francis JJ, Grimshaw JM, Hall RI, Johnston BL, Kanji S, Marshall JC, Mcintyre LLA, Muscedere J, Rose L, Webster F, Weijer CE: Canadian Institutes of Health Research (CIHR). (\$198,322 2010 -2013).

The RECOVER Program: Phase I Towards RECOVER - Outcomes and Needs Assessment in Survivors of Prolonged Mechanical Ventilation and Their Caregivers. Herridge M, Cameron II, Marshall JC: Canadian Institutes of Health Research (CIHR). (\$704,367 2009 -2013).

Towards Equity in Access to Trauma Care: A Mixed-Methods Approach to Spatial Analyses of Existing Trauma Transfer Networks. Nathens A, Gagliardi A, Gomez D, Haas B, Rubenfeld G, Gozdyra P: Canadian Institutes of Health Research (CIHR). (\$199,844 2010 - 2012).

Trauma System Development in Canada: Overcoming the Challenges of Geography Through an Evaluation of Structure and Process. Nathens A, Cusimano M, Gagliardi A, Gomez D, Haas B, Hameed M, Lawless B, Morrison L, Peters P, Pong R, Rubenfeld G, Schurmann N, Snider C, Tallon J: Canadian Institutes of Health Research (CIHR). (\$2,264,139 2010 - 2015).

Weaning and Variability Evaluation (WAVE) - a multicenter evaluation of altered heart rate and respiratory rate variability to predict extubation failure. Seely AJE, Ferguson ND, Fergusson DA, Hooper J, Lellouche F, Maziak DE, Marshall JC, Mcintyre LLA, Ramsay TO, Rubenfeld G, Scales DC, Wilkes P, Zarychanski R: Canadian Institutes of Health Research (CIHR). (\$299,320 2010 - 2013).

### **HONOURS RECEIVED**

George R: William Horsey Postgraduate Teaching Award, St. Michael's Hospital. (Postgraduate MD). 2011.

Grantcharov T: Queen Elizabeth II Diamond Jubilee Medal, Governor General of Canada, February 2012.

Grantcharov T: George Armstrong-Peters Prize, University of Toronto. May 2012.

Kuebler W: Fellowship, Mentor, Awardee: H. Ranke. International Academy of Life Sciences, Hannover, Germany, 2010 - present

Kuebler W: Pfizer Sponsorship Award for Young Investigators in Pulmonary Hypertension, Mentor, Awardee Name: J. Hoffmann. Pfizer, Munich, awarded at the 5th PH UP2DATE conference, 2011.



Kuebler W: 2011 Poster Award, Sponsor/Mentor, awardee: J. Hoffmann. Bayer HealthCare, Leverkuse, 2011, awarded at the 2nd Research Workshop on Pulmonary Hypertension.

Kuebler W: Fellowship, Mentor, Awardee: X. Lei. Kaiserin-Friedrich Foundation, Berlin, Germany, 2011- present

Kuebler W: Fellowship, Mentor, Awardee: F. Chen. Kaiserin-Friedrich Foundation, Berlin, Germany, 2011- present

Kuebler W: Fellowship, Mentor, Awardee: L. Wang. Kaiserin-Friedrich Foundation, Berlin, Germany, 2007- present

Kuebler W: Fellowship (CREMS Research Scholar Program), Mentor, Awardee Name: C. Tang. University of Toronto, 2010- present

Marshall JC: Jameel Ali Award in Continuing Medical Education, Dept of Surgery, Faculty of Medicine, St. Michael's Hospital. June 2012.

Mustard R: Excellence in Postgraduate Medical Education Award, General Surgery, University of Toronto. July 2011 - June 2012.

Nathens AB: Arthur Award for most media hits, St. Michaels Hospital Li Ka Shing Knowledge Institute. 2011

Rotstein O: Honoured with the Ori Rotstein Lectureship in Knowledge Translation, Institute of Medical Science, University of Toronto, Ontario, Canada, 2011.

Rotstein O: Queen Elizabeth II Diamond Jubilee Medal, Governor General of Canada, March

Szaszi K: Early Researcher Award, Ontario Ministry of Research and Innovation, Canada. Salary for lab members. September 2010 - August 2015.

### Division of Neurosurgery

Dr. M.D. Cusimano Professor

Assistant Professor Dr. S. Das Dr. H. Ginsberg **Assistant Professor** Dr. R.L. Macdonald Professor (Division Head)

Dr. P. Muller Professor

Dr. R.G. Perrin Associate Professor Dr. T.A. Schweizer Assistant Professor Dr. J. Spears **Assistant Professor** 

### **PUBLICATIONS**

Alkins R, Marotta T, Montanera W, Cruz J, Spears J. Carotid Artery Angioplasty and Stenting for Patients Less than 70 years of Age. Canadian Journal of Neurological Sciences: 2012 May; 39(3):338-342.

Aly AH, Ginsberg H, Cobbold RSC. On Ultrasound Imaging for Guided Screw Insertion in Spinal Fusion Surgery. Ultrasound in Medicine and Biology: 2011; 37(4): 651-654.

Arasanz CP, Staines WR, Roy EA, Schweizer TA. The cerebellum and its role in word generation: a cTBS study. Cortex. 2012 Jun; 48(6):718-724.

Cheng K, Sun C, Cruz J, Marotta T, Montanera W, Thind A, Courtney B, Standish B, Yang V. Comprehensive data visualization for high resolution endovascular carotid arterial wall imaging. Journal of Biomedical Optics: 2012 May; 17(5):056003.

Cook DJ, Kan S, Ai J, Kasuya H, Macdonald RL. Cisternal sustained release dihydropyridines for subarachnoid hemorrhage. Curr Neurovasc Res: 2012 May; 9(2):139-148.

Crowley RW, Macdonald RL. Is vasospasm actually bad for you? World Neurosurgery: 2011 Jul-Aug; 76(1-2):6.

Cruz J, Spears J, Marotta T. Delayed ipsilateral parenchymal hemorrhage: A Complication related to the treatment of anterior circulation aneurysms with flow diversion. American Journal of Neuroradiology: 2012; 33:603-608.



Cusimano M, Luong WP, Faress A, Leroux T, Russell K. Evaluation of a ski and snowboard injury prevention program. Int J Inj Contr Saf Promot: 2012 Jan. E-pub ahead of print.

Cusimano MD, Rewilak D, Stuss DT, Barrera-Martinez JC, Salehi F, Freedman M. Normal-Pressure Hydrocephalus: Is there a genetic predisposition? Canadian Journal of Neurological Sciences: 2011: 3(2):274.

Cusimano MD, Taback NA, McFaull SR, Hodgins R, Bekele T, Elfeki N. Effect of bodychecking on rate of injuries among minor hockey players. Open Medicine: 2011: 5(1): E57.

Demarchi R, Abu-Abed S, Munoz D, Macdonald RL. Malignant ganglioglioma: case report and review of literature. J Neuroonc: 2011; 101:311-318.

Diaz RJ, Cusimano MD. The biological basis for modern treatment of chordoma. J Neurooncol: 2011 Sep; 104(2):411-422.

Dumont A, Crowley RW, Monteith SJ, Ilodigwe D, Kassell NF, Mayer S, Ruefenacht D, Schmiedek P, Weidauer S, Pasqualin A, Macdonald RL. Endovascular treatment or neurosurgical clipping of ruptured intracranial aneurysms: effect on angiographic vasospasm, delayed ischemic neurological deficit, cerebral infarction and clinical outcome. Stroke: 2011; 41:2519-2524.

Fine B, Singh N, Aviv R, Macdonald RL. Decisions: does a patient with a thunderclap headache need a lumbar puncture? CMAJ: 2012 March;184(5):555-556.

Harris MA, Reynolds CC, Winters M, Chipman M, Cripton PA, Cusimano MD and Teschke K. The Bicyclists' Injuries and the Cycling Environment study: a protocol to tackle methodological issues facing studies of bicycling safety. Inj Prev: 2011 Oct;17(5):e6.

Hayhurst C, Monsalves E, van Prooijen M, Cusimano M, Tsao M, Menard C, Kulkarni AV, Schwartz M, Zadeh G. Pretreatment predictors of adverse radiation effects after radiosurgery for arteriovenous malformation. Int J Radiat Oncol Biol Phys: 2012 Feb; 82(2):803-808.

Ibrahim GM, Ebinu JO, Rubin LA, de Tilly LN, Spears J. Gouty arthropathy of the axial skeleton causing cord compression and myelopathy. Canadian Journal of Neurological Sciences: 2011 Nov; 38(6):918-920.

Ibrahim GM, Macdonald RL. Letter to the Editor regarding: Method of Aneurysm treatment Does Not Affect Clot Clearance After Aneurysmal Subarachnoid Hemorrhage. Neurosurgery: 2012 Jan 18. E-pub ahead of print.

Ibrahim GM, Vachhrajani S, Ilodigwe D, Kassell NF, Mayer SA, Ruefenacht D, Schmiedek P, Weidauer S, Pasqualin A, Macdonald RL. Method of aneurysm treatment does not affect clot clearance after aneurysmal subarachnoid hemorrhage. Neurosurgery: 2011 Nov; 70(1):102-109.

Ibrahim GM, Weidauer S, Macdonald RL. Interobserver variability in the interpretation of computed tomography following aneurysmal subarachnoid hemorhage. J Neurosurg: 2011 Dec; 115(6):1191-1196.

Ibrahim GM, Weidauer S, Vatter H, Raabe A, Macdonald RL. Attributing hypodensities on CT to angiographic vasospasm is not sensitive and unreliable. Stroke: 2012 Jan; 43(1):109-112.

Ismail Z, Nguyen MQ, Fischer CE, Schweizer TA & Mamo D. Neurobiology of delusions in Alzheimer's disease. Current Opinion in Psychiatry: 2011; 13(3):211-218.

Jaja B, Lo BW, Ilodigwe D, Macdonald R. Clinical prediction models in aneurysmal subarachnoid hemorrhage. Can J Neurol Sci: 2012; Suppl 3; S11.

Kapadia AN, Naik NP, Macdonald R, Schweizer TA. Cognitive and mood profile of Sturge-Weber Syndrome affecting the thalamus. Can J Neurol Sci: 2012 May; 39(3):402-404.

Laupacis A, Lillie E, Dueck A, Straus S, Perrier L, Burton JM, Aviv R, MMath KT, Feasby T, Spears J. Systematic Review of the Association between Chronic Cerebrospinal venous insufficiency and multiple Sclerosis. Canadian Medical Association Journal: 2011 Nov; 183(16):E1203-E1212.

Lo BWY, Fox-Robichaud A, McCredie V, Jaja B, Schweizer TA, Meade M, Cook D, Macdonald R. Biochemical prognostic markers in aneurysmal subarachnoid hemorrhage - as systematic review. Can J Neurol Sci: 2012; Suppl 3: S30.

Lo, BWY, Levine M, Pluta RM, Ilodigwe D, Pullenayegum E, Thabane L, Farrokhyar F, Macdonald R. Clinical outcome prediction in anerysmal subarachnoid hemorrhage using advanced biostatistical modeling. Can J Neurol Sci: 2012; Suppl 3: S11.

Macdonald RL. Editorial Comment. Neurosurgery: 2011; 68:19.

Macdonald RL. Editorial: on the persisting difficulty of making predictions, especially about the future. J Neurosurg: 2012 April; 116(4):866-869.



Macdonald RL. Cognitive function after SAH: novel results of testing in the acute setting. World Neurosurgery: 2011; 75:596-597.

Macdonald RL. Dissecting the Complexities of Aneurysm Hemodynamics. World Neurosurgery: 2011 Nov; 78(5):418-421.

Macdonald RL. Effect of site-specific, sustained-release nimodipine on vasospasm after subarachnoid hemorrhage in dogs. Stroke: 2011; 42:e100.

Macdonald RL. Ischemia. J Neurosurg: 2012 March; 116(3)643-646.

Macdonald RL. Mirror aneurysms. J Neurosurg: 2012 June; 116(6):1235-1236.

Macdonald RL. Optimal antiepileptic drug use for patients with subarachnoid hemorrhage. World Neurosurgery: 2011; 75:211-213.

Macdonald RL. Predicting vasospasm after subarachnoid hemorrhage. World Neurosurgery: 2011 Jan; 75:25-26.

Macdonald RL. Shunts and aneurysms. World Neurosurgery: 2011 Dec; 76(6):520-521.

Macdonald RL, Higashida R, Keller E, Mayer SA, Molyneux Aj, Raabe A, Vajkoczy P, Wanke I, Bach D, Frey A, Nowbakht P, Roux S, Kassell NF. Randomized trial of clasosentan in patients with aneurysmal subarachnoid hemorrhage using advanced biostatistical modeling. Can J Neurol Sci: 2012; Suppl 3: S11.

Macdonald RL, Higashida RT, Keller E, Mayer SA, Molyneux A, Raabe A, Vajkoczy P, Wanke I, Bach D, Frey A, Nowbakht P, Roux S, Kassell N. Randomized trial of clasosentan in patients with aneurysmal subarachnoid hemorrhage undergoing endovascular coiling. Stroke: 2012 June; 43(6):1463-1469.

Macdonald RL, Higashida R, Keller E, Mayer SA, Molyneux A, Raabe A, Vajkoczy P, Wanke I, Bach D, Frey A, Marr A, Roux S, Kassell NF. Clazosentan, an endothelin receptor antagonist in patients with aneurysmal subarachnoid hemorrhage undergoing surgical clipping: a randomized, double-blind, placebo-conrolled phase 3 trial (CONSCIOUS-2). Lancet Neurol: Jul 2011; 10(7):618-625.

Macdonald RL, Hunsche E, Schuler R, Wlodarczyk J, Mayer SA. Quality of life and healthcare resource use associated with angiographic vasospasm after aneurysmal subarachnoid hemorrhage. Stroke: 2012 Apr; 43(4) 1082-1088.

Manoranjan B, Syro LV, Scheithauer BW, Ortiz LD, Horvath E, Salehi F, Kovacs K and Cusimano MD. Undifferentiated sarcoma of the sellar region. Endocr Pathol: 2011 Sep; 22(3):159-

Martin AR, Pablo Cruz J, Matouk CC, Spears J, Marotta TR. The Pipeline flow-diverting stent for exclusion of ruptured intracranial aneurysms with difficult morphologies. Neurosurgery: 2012 Mar; 70(1):21-28.

Martin RL, Suarez JI, The ALISAH Study Investigators. The ALISAH study: A dose escalation and safety study of 25% human albumin therapy in subarachnoid hemorrhage - outcome results and treatment effects. Stroke: 2011; 42:e99-e100.

Matouk CC, Ellis MJ, Kalia SK, Ginsberg HJ. Skull fracture secondary to application of a Mayfield skull clamp in an adult patient: Case report and review of the literature. Clinical Neurology and Neurosurgery: 2011. ePub ahead of print.

Nassiri F, Cusimano M, Rotondo F, Horvath E and Kovacs K. Neuroendocrine Tumor of Unknown Origin Metastasizing to a Growth Hormone-Secreting Pituitary Adenoma. World Neurosurg: 2012 Jan; 77(1):201.

Nassiri F, Scheithauer BW, Rotondo F, Fazio A, Syro LV, Kovacs K, Lloyd RV. Prolactinomas: diagnosis and treatment. Expert Review of Endocrinology and Metabolism: 2012 Mar; 7(2):233-

O'Kelly CJ, Spears J., Urbach D, Wallace MC. Proximity to the Treating Centre and outcomes following subarrachnoid hemorrahage. Canadian Journal of Neurological Sciences: 2011; 38 (1):

Rotondo F, Cusimano M, Scheithauer BW, Rotondo A, Syro LV, Kovacs K. Ghrelin immunoexpression in pituitary adenomas. Pituitary: 2011 Dec; 14(4):318-322.

Rotondo A, Rotondo F, Scheithauer BW, Sharma S, Syro LV, Cusimano MD, Kovacs K. Immunohistochemicaldemonstration of ghrelin in the nontumorous human hypophysis. FASEB Journal: 2011; 25:1002-1005.

Rotondo F, Cusimano MD, Scheithauer BW, Rotondo A, Syro LV, Latta E, Kovacs K. Ghrelin immunoexpression in pituitary adenomas. FASEB Journal: 2011; 25:1001-1013.



- Rotondo F, Rotondo A, Scheithauer BW, Cusimano M, Latta E, Syro LV, Kovacs K. Ghrelin immunoexpression in the human hypophysis. Appl Immunohistochem Mol Morphol: 2012 Jan; 20(1):77-81.
- Rotondo F, Khatun N, Scheithauer BW, Horvath E, Marotta TR, Cusimano MD, Kovacs K. Unusual double pituitary adenoma: a case report. Pathology International: 2011; 61: 42-46.
- Rotondo F, Scheithauer BW, Coire C, Horvath E, Koyacs K. Atypical, invasive, recurring Crooke cell adenoma of the pituitary. Hormones: 2012 Jan; 11(1): 94-100.
- Sabri M, Ai J, Macdonald RL. Nitric oxide related pathophysiological changes following subarachnoid hemorrhage. Acta Neurochir Suppl: 2011; 110:105-109.
- Salehi F, Scheithauer BW, Kovacs K, Horvath E, Syro LV, Sharma S, Manoranjan B and Cusimano M. O-6-Methylguanine-DNA Methyltransferase (MGMT) Immunohistochemical Expression in Pituitary Corticotroph Adenomas. Neurosurgery: 2012 Feb; 70(2):491-496.
- Schweizer TA, Al-Khindi T, Macdonald RL. Mini-Mental State Examination versus Montreal Cognitive Assessment: rapid assessment tools for cognitive and functional outcome after aneurysmal subarachnoid hemorrhage. J Neurol Sci: 2012 May; 316(1-2): 137-140.
- Schweizer TA, Macdonald RL. Ten Years After SAH: Would They "Love to Change the World?" World Neurosurgery: 2012 June 25. Epub ahead of print.
- Sheldon S, Macdonald RL, Schweizer TA. Free recall memory performance after aneurysmal subarachnoid hemorrhage. J Int Neuropsychol Soc: 2012 Mar; 18(2):334-342.
- Singh DA, Ginsberg HJ, Whyne CM. A 2D-3D Registration Tool Capable of Accurately Quantifying Flexion-Extension Positioning in the Cervical Spine. The Open Spine Journal: 2011; 3:1-8.
- Singh DA, Ginsberg HJ, Whyne CM. Evaluating the ability of posterior elements to support new instrumentation for spinal fusion. Proceedings of the Institution of Mechanical Engineers. Part H, Journal of engineering in medicine. Proc Inst Mech Eng H: 2011; 225(11): 1084-1091.
- Sivapragasam M, Rotondo F, Lloyd RV, Scheithauer BW, Cusimano M, Syro LV, Kovacs K. MicroRNAs in the human pituitary. Endocr Pathol: 2011 Sep; 22(3):134-143.
- Strong AJ, Macdonald RL. Cortical spreading ischemia in the absence of proximal vasospasm after aneurysmal subarachnoid hemorrhage: evidence for a dual mechanism of delayed cerebral ischemia. J Cereb Blood Flow Metab: 2012 Feb; 32(2):201-202.
- Suarez II, Martin RL, The ALISAH Study Investigators. The ALISAH study: A dose escalation and safety study of 25% human albumin therapy in subarachnoid hemorrhage - safety results and physiologic response. Stroke: 2011; 42:3160.
- Suarez JI, Martin RH, Calvillo E, Dillon C, Bershad EM, Macdonald RL, Wong J, Harbaugh R, ALISAH Investigators. The Albumin in Subarachnoid Hemorrhage (ALISAH) multicenter pilot clinical trial: safety and neurologic outcomes. Stroke: 2012 Mar; 43(3)683-690.
- Tang J, Ai J, Macdonald RL. Developing a model of chronic subdural hematoma. Acta Neurochir Suppl: 2011; 111:25-29.
- Topolovec-Vranic J, Ennis N, Johnson P, Michalak A, Distin K, Masanic C, Ouchterlony D, Cusimano MD. Exploring the link between traumatic brain injury and homelesssness: a feasibility study. Brain Injury: 2012; 26 (4-5): 575.
- Vergouwen MDI, Etminan N, Ilodigwe D, Macdonald RL. Lower incidence of cerebral infarction correlates with improved functional outcome after aneurysmal subarachnoid hemorrhage. J Cereb Blood Flow Metab: 2011 Jul; 31(7):1545-1553.
- Weidman J, Ginsberg H, Tavakkoli J. Combined Effects of Low Intensity Pulsed Ultrasound and Heat on Bone Cell Mineralization. Canadian Acoustics: 2011; 39(4): 37-43.
- Witiw CD, Fallah A, Muller PJ, Ginsberg HJ. Surgical treatment of spontaneous intracranial hypotension secondary to degenerative cervical spine pathology: a case report and literature review. European Spine Journal: 2011: ePub ahead of print.
- Zoerle T, Ilodigwe DC, Wan H, Lakovic K, Sabri M, Ali J, Macdonald RL. Pharmacologic reduction of angiiographic vasospasm in experimental subarachnoid hemorrhage. I Cereb Blood Flow Metab: 2012 Apr; 32(9):1645-1658.



### **INVITED VISITS**

Cusimano MD: Invitational Workshop on New Opportunities in Traumatic Brain Injury, Toronto, Ontario, Canada, 12 April 2012. Invited Speaker: TBI: Incidence, Vulnerable Populations & Economic Burden in Canada.

Cusimano MD: International Society of Pituitary Surgeons, Montreal, Quebec, Canada, 22 June 2012. Invited Speaker: The Binasal Endoscopic Approach for Giant and Large Pituitary Adenomas: A Comparison to Microscopic Transsphenoidal and Craniotomy Approaches.

Macdonald RL: 40th Critical Care Congress, Society of Critical Care Medicine, San Diego, California, 2011. Invited Speaker: New Therapies for Subarachnoid Hemorrhage.

Macdonald RL: Chicago Review Course in Neurosurgery, Chicago, Illinois, 2011. Invited Speaker: Pathophysiology of Subarachnoid Hemorrhage and Vasospasm.

Macdonald RL: Magnesium and Aneurysmal Subarachnoid Hemorrhage Session, International Stroke Conference, Los Angeles, California, 2011. Invited Speaker: Vasospasm Basic Research: What Have We Learnt in the Past Decade and Why Is Magnesium of Interest?

Macdonald RL: Traumatic Brain Injury Conference: New Biomedical Pharmaceutical Approaches, Washington, D.C., 2011. Invited Speaker: Site-Specific, Sustained Release Drug Delivery for Prevention of Complications of Traumatic Brain Injury.

Macdonald RL: Annual Meeting of the Congress of Neurological Surgeons, Washington, District of Columbia, United States, October 2011. Moderator: Mutlidisciplinary management of subarachnoid hemorrhage and vasospasm. Luncheon Seminar.

Macdonald RL: 38th International Stroke Conference, New Orleans, Louisiana, United States, 1-2 February 2012. Presenter: (1) Effect of Clazosentan on clinical outcome after aneurysmal subarachnoid hemorrhage and endovascular coiling: results of the CONSCIOUS-3 study. (2) Microthombosis and microcirculatory constriction after experimental subarachnoid hemorrhage.

Macdonald RL: Chicago Review Course, Chicago, Illinois, United States, 3 February 2012. Invited Speaker: Pathophysiology of Subarachnoid Hemorrhage and Vasospasm.

Macdonald RL: 80th Annual Meeting of the American Association of Neurological Surgeons, Miami, Florida, United States, 14 April 2012. Invited Speaker: Diagnosis of Delayed Cerebral Ischemia. Breakfast Seminar.

Macdonald RL: Jeremy Jeanes Neurocritical Care Conference, Banff, Alberta, Canada, 3 May 2012. Invited Speaker: Vasospasm and SAH: Current Understanding, Pathophysiology and Treatment Options.

Macdonald RL: Department of Defence, Fort Detrick, Florida, United States, 11 May 2012. Invited Speaker: Intraventricular Administration of NioVent(Site-specific, Sustained Release Nimodipine) to Prevent Secondary Brain Damage Following Traumatic Brain Injury.

Macdonald RL: Debate at Princeton Conference XXVIII, Cincinnati, Ohio, United States, 18 May 2012. Invited Speaker: Does Preventiion of Vasospasm in SAH Improve Clinical Outcome: Yes.

Macdonald RL: Society for Brain Mapping and Therapeutics, Toronto, Ontario, Canada, 2 June 2012. Invited Speaker: Sustained Release Intracranial Drug Delivery for Traumatic Brain Injury.

Macdonald RL: 47th Annual Congress of the Canadian Neurological Sciences Federation, Ottawa, Ontario, Canada, 5 June 2012. Presenter: Randomized trial of clazosentan in patients with aneurysmal subarachnoid hemorrhage undergoing endovascular coiling.

Spears J: World Federation of Interventional and Therapeutic Neuroradiology, South Africa, 8 November 2011. (1) Delayed ipsilateral Brain Parenchymal Hemorrhage after Aneurysm Treatment with Pipeline Stent. (2) Pipeline Stent in Ruptured Intracranial Aneurysms. (3) The effect of patient age on the safety of carotid artery angioplasty and stenting. (4) The Entry Remnant Phenomenon in Flow Diverter Stents. (5) Implementation of a risk stratification algorithm for the surveillance of endovascularly treated intracranial aneurysms.

Spears J: Rouge Valley Centenary Hospital, Toronto, Ontario, Canada, 27 April 2012. Invited Speaker: C.E.LHIN @ RVHS Emergency Medicine & Critical Care Grand Rounds. Optimizing Quality Care of the Neurosurgical Patient.

Spears I: North York General Hospital, Toronto, Ontario, Canada, 8 May 2012. Invited Speaker: North York General Medical Rounds. Carotid Revascularization and New aneurysm treatments.



### RESEARCH AND INVESTIGATIONS

CIHR Team Grant in Traumatic Brain Injury and Violence. Cusimano MD, Mann R, Tator C, Schweizer T, et al: Canadian Institutes of Health Research (CIHR). (\$1,983,131 2010 - 2015).

Design and Testing of a Novel Posterior Spinal Fusion Device Providing a Less-Invasive and Faster Alternative to Current Techniques. Ginsberg H, Whyne C, Singh D: Canadian Institutes of Health Research (CIHR). (\$105,000 2009 - 2012).

Driving after stroke. Schweizer T: Heart and Stroke Foundation of Ontario, Centre for Stroke Recovery. (\$25,000 2011 - 2013).

Endothelial nitric oxide synthase after subarachnoid hemorrhage. Macdonald RL: Heart and Stroke Foundation of Canada (HSFC). (\$174,718 2011 - 2013).

Improving outcome of patients with subarachnoid hemorrhage. Macdonald RL: Province of Ontario, St. Michael's Hospital Medical Services Association and Inno. (\$22,000 2011 - 2012).

Microparticle matrix to prevent delayed complications after spontaneous and traumatic brain hemorrhage- a platform delivery system. Macdonald R: Ontario Brain Institute, Fed Dev Technology Development Program and Edge Therapeutics. (\$700,000 2012 - 2014).

Molecular mechanisms of memory loss following subarachnoid hemorrhage. Macdonald RL, Ai J: Brain Aneurysm Foundation (The). (\$25,000 2011 - 2012).

Strategic Team Grant in Applied Injury Research: Traumatic Brain Injury & Violence: Reducing the risks, improving the outcomes. Cusimano MD, Ackery A, Asbridge M, Bhalerao S, Clarke D, Colantonio A, Comper P, Cukier W, Cullen J, Delay D, Donnelly P, Graham S, Harris J, Hoch J, Hoshizaki T, Hutchison M, Hwang S, Kontos P, Man R, Morton T, Rinner C, Roy E, Schweizer T, Shlonsky A, Snider C, Tator C, Tepperman L, Topolovec-Vranic J, Voaklander D, Wolfe D: Canadian Institutes of Health Research (CIHR). (\$1,750,000 2010 - 2016).

Subarachnoid nimodipine treatment for vasospasm. Macdonald RL: New Jersey Commission on Science and Technology (USA), Edison Innovation R&D Fund. (\$500,000 2009 - 2012).

Systemic reviews of the evidence that tests for chronic cerebrospinal venous insufficiency (CCSVI) are valid and reproducible, that CCSVI is associated with multiple sclerosis, and of the benefits and harms of endovascular therapy for multiple sclerosis. Laupacis A, Aviv R, Burton J, Dueck A, Feasby T, Perrier L, Spears J, Straus S, Thorpe K: Canadian Institutes of Health Research (CIHR). (\$99,300 2012 - 2013).

Tablet Technology for Assessing Dementia. Graham S, Schweizer T: Canadian Institutes of Health Research (CIHR), Proof of Principle Program - Phase I. (\$116,402 2011 - 2012).

The role of prostacyclins in the survival of glioblastoma brain tumor stem cells. Das S: b.r.a.i.n.child, Research Award. (\$80,000 2011 - 2013).

The role of the epithelial-mesenchymal transition in the maintenance of stem-cell identity in glioblastoma brain tumor stem cells. Das S: b.r.a.i.n.child, Research Award. (\$44,100 2011 - 2013).

Trauma System Development in Canada: Overcoming the challenges of geography through an evaluation of structure and process. Nathens A, Gagliardi A, Pong R, Rubenfeld G, Schuurman N (Senior Investigators); Hameed S, Lawless B, Morrison L, Pandya A, Peters P, Schwartz B, Snider C, Tallon J, Cusimano M: Canadian Institutes of Health Research (CIHR). (\$1,990,000 2010 - 2015).

Validation of non-invasive rapid eye movements measurement as screening tool for mild traumatic brain injury. Cusimano M: Canadian Institutes of Health Research (CIHR). (\$250,140 2012 - 2015).

### **HONOURS RECEIVED**

Cusimano MD: The Donald J. Currie Undergraduate Teaching Award, Neurosurgery, Dept of Surgery, Faculty of Medicine, St. Michael's Hospital. July 2011 - June 2012.

Schweizer TA: New Investigator Award, Heart and Stroke Foundation of Canada, Canada. July 2011 - July 2016.

Schweizer TA: Early Researcher Award, Ontario Ministry of Research and Innovation. June 2011 - June 2016.



### **Division of Orthopaedics**

**Assistant Professor** Dr. H. Ahn

Dr. E.R. Bogoch Professor

Dr. T. Daniels Associate Professor Dr. J. Hall **Assistant Professor** 

Dr. M. McKee Professor

Dr. E. Schemitsch Professor (Division Head)

Dr. J.P. Waddell Professor

**Assistant Professor** Dr. D. Whelan

### **PUBLICATIONS**

(SPRINT) Investigators, Sun X, Heels-Ansdell D, Walter SD, Guyatt G, Sprague S, Bhandari M, Sanders D, Schemitsch EH, Tornetta P 3rd, Swiontkowski M. Is a subgroup claim believable? A user's guide to subgroup analyses in the surgical literature. Journal of Bone and Joint Surgery (American): 2011 Feb; 93(3):e8.

Al-Jahwari A, Schemitsch EH, Wunder JS, Ferguson PC and Zdero R. The biomechanical effect of torsion on humeral shaft repair techniques for completed pathological fractures. J Biomech Eng: 2012 Feb;134(2):024501.

Atesok KI, Alman BA, Schemitsch EH, Peyser A and Mankin H. Osteoid osteoma and osteoblastoma. J Am Acad Orthop Surg: 2011 Nov; 19(11):678-689.

Bhandari M, Schemitsch EH. Fragility fractures: a global problem? Introduction. Journal of Orthopaedic Trauma: 2011; Supp 25: 41.

Bhandari M, Tornetta P 3rd, Rampersad SA, Sprague S, Heels-Ansdell D, Sanders DW, Schemitsch EH, Swiontkowski M, Walter S. (Sample) Size Matters! An examination of sample size from the SPRINT Trial. Journal of Orthopaedic Trauma: 2012 June. Epub ahead of Print

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### **INVITED VISITS**

Ahn H: KASS, Los Angeles, California, 8 July 2011. Presenter: Percutaneous Fixation of Ankylosing Spondylitis Fractures.

Ahn H: AO Spine Education, Toronto, Ontario, 28-29 October 2011. Presenter: Management of Thoracolumbar Trauma The B2 Fracture.

Ahn H: Canadian Orthopaedic Resident Trauma Course, Toronto, Ontario, 24-26 November 2011. (1) Podium Presentation - Management of Cervical Spine Trauma and Case Scenarios. (2) Podium Presentation - Management of Thoracolumbar Trauma and Case Scenarios.

Ahn H: Canadian Orthopaedic Residents Reconstruction Course, Ontario, Canada, 15-20 January 2012. (1) Facilitator: Review and Discussion of Spinal Reconstruction Cases. (2) Speaker: Management of Post Operative Complications.

Ahn H: Canadian Spine Society, Kamloops, British Columbia, Canada, 2 March 2012. Presenter: ICD-10 Coding Accuracy for Traumatic Spinal Cord Injury.

Ahn H: AO Spine - Rick Hansen, Vancouver, British Columbia, Canada, 15 May 2012. Presenter: (1) ICD 10 Coding Accuracy for Spinal Cord Injury. (2) Addressing Privacy Requirements for the Development of a National Health Registry in Canada.



Ahn, Henry: Asia Pacific Spine SSID Meeting, Singapore, 15-16 June 2012. (1) Facilitator: Management of Spondylolisthesis and Scoliosis. (2) Speaker: Surgical Timing for Acute Spinal Cord Injury - The Toronto Experience. (3) Invited Speaker: Accuracy of Navigation With and Without Three Dimensional Imaging.

Ahn H: Canadian Association of Physical Medicine and Rehabilitation (CAPMR) National Meeting, Toronto, Ontario, Canada, 22 June 2012. Invited Speaker: Its Not Over Yet - Long Term Spinal Column Problems After SCI - Charcot Spine.

Ahn H: KASS Spine Society, United States, 28 - 29 June 2012. (1) Presenter: Volume Outcome Relationships and Adverse Events For Adolescent Idiopathic Scoliosis Surgery. (2) Invited Speaker: Minimally Invasive Spine Surgery Is Here to Stay - Evidence, Outcomes and Cases.

Bogoch ER: Canadian Orthopaedic Resident Review in Trauma (CORR-Trauma), Mississauga, Ontario, Canada, 25 November 2011. Speaker: Top Ten Things You Need to Know About Osteoporosis.

Bogoch ER: 12th Annual Meeting of the Korean Society of Osteoporosis, Seoul, Korea, Republic Of, 12 December 2011. Prevention of Subsequent Fractures in Patients who have Fragility

Bogoch ER: Professor Park, Ye Soo, Guri Hospital, Hanyang Univ College of Medicine, Seoul, Korea, Republic Of, 13 December 2011. Managing Fracture Secondary Prevention Programs: Lessons Learned Along the Way.

Bogoch ER: Canadian Orthopaedic Resident Review in Reconstructive Surgery (CORR-Recon), Mississauga, Ontario, Canada, 21 January 2012. Speaker: Practical Fracture Prevention.

Bogoch ER: Developing Diagnoses and Implementing Achievable Treatment Goals: Today's Science Directs Tomorrow's Therapy, Vienna, Austria, 6 May 2012. A systematic approach to secondary fracture prevention: Workshop.

Bogoch ER: Canadian Orthopaedic Association 67th Annual Meeting, Ottawa, Ontario, Canada, 9 June 2012. (1) Chair: COA symposium: Fracture Prevention. (2) Speaker: Practical fracture prevention through fracture risk assessment.

Daniels T: AOFAS summer meeting, Keystone, Colorado, United States, 13 July 2011. (1) Coordinator and Moderator: Research forum. (2) Moderator: Symposium on peritalar instability: what if my fracture treatment leads to an unbalanced hindfoot?

Daniels T: COA, St. John's, Newfoundland, 7-8 July 2011. Speaker: (1) Hallux rigidus - the Cartiva alternative (joint preserving surgery). (2) ICL, Level IV evidence based medicine foot & ankle: the good and the bad. (3) Tips and tricks: The 5 keys to reducing anterior ankle incision complications. (4) Moderator: ICL 10 COFAS: new solutions to old problems.

Daniels T: XLVII Congreso Chileno de Ortopedia y Traumatologia, Santiago, Chile, 16-17 November 2011. Distinguished Speaker: (1) Surgical options for hallux valgus deformities. (2) Ankle fusion vs TAR. (3) Ankle medial and subtalar instability. (4) Total Ankle Replacement in cavovarus foot. (5) TAR in adult acquired flat foot. (6) Surgical treatment in chronic Achilles tendinitis. (7) Treatment of the posterior tibial tendon dysfunction.

Daniels T: CORR-Recon, Toronto, Ontario, Canada, 19 January 2012. (1) Course Director (Foot and Ankle Session): Canadian orthopaedic resident review in reconstructive surgery (CORR-Recon). (2) Invited Speaker: Canadian orthopaedic resident review in reconstructive surgery (CORR-Recon). (3) Session Leader: Canadian orthopaedic resident review in reconstructive surgery (CORR-Recon)

Daniels, Timothy: AAOS 2012 Annual Meeting, San Francisco, California, United States, 9-11 February 2012. Invited Speaker: (1) Comparative ankle arthroplasty outcomes with preoperaitve talar varus deformity 10 degrees or greater. (2) Randomized controlled trial of hallux valgus treated with medial-opening vs Chevron metatarsal osteotomy. (3) Chair: AOFAS Research Committee Critical updates on key AOFAS/OEF funded research projects.

Daniels T: Alberta Orthopaedic Resident Research Day, Edmonton, Alberta, Canada, 13 April 2012. Visiting Professor: (1) Residents Abstract presentations and nominations. (2) Stage IV posterior tibial tendon dysfunction.

Daniels T: Candian Orthopaedic Foot and Ankle Society, The 10th Biennial COFAS Foot and Ankle Symposium: Fairmont Royal York Hotel, Toronto, Ontario, Canada, 20 April 2012. Chair: Moderator: (1) Ankle Cases/Discussion. (2) Foot and ankle clinics - Clinical examination by the expert panel. (3) Hindfoot Arthritis: Ankle arthritis - fusion or replacement. (4) Hindfoot Arthritis: Surgical management of the valgus ankle. (5) Management of midfoot and forefoot pathologies.



Daniels T: COA, Ottawa, Ontario, Canada, 8-9 June 2012. Presenter: (1) COFAS multi-centre study comparing total ankle arthroplasty and ankle arthrodesis: Mid-term results. (2) Is valgus deformity of greater than 10 degrees at the ankle really a contraindication to ankle arthroplasty? (3) Total ankle replacements in the presence of hindfoot deformities - When to perform an osteotomy. (4) Lab instructor: Foot and ankle workshop: Ankle arthroscopy / Ankle ligament reconstruction. (5) Facilitator: Foot and ankle symposium: Treatment of arthritis and deformity in the hind- and

Daniels T: American Orthopaedic Foot and Ankle Society, AOFAS Summer Meeting 2012 San Diego, California, United States, 20-23 June 2012. (1) Distinguished Speaker: Regenerative Strategies and Emerging Technologies: "Role of PDGH in bone fusions - The international experience". (2) Invited Speaker: The science behind Total Ankle Replacement: The benefit of TAR on gait. (3) Invited Speaker: COFAS multicenter study comparing total ankle arthroplasty and ankle arthrodesis: Mid-term results. (4) Invited Speaker: Outcomes of hindfoot and ankle fusions treated with Augment Injectable Bone Graft: Results of a prospective randomized controlled trial. (5) Invited Speaker: Is valgus deformity greater than 10 degrees at the ankle really a contraindication to total ankle arthroplasty?

Hall J: Peterborough Regional Health Centre, Toronto, Ontario, Canada, 16 September 2011. Invited Speaker: What's New in Fracture Care Treatment of osteoporosis and related fractures, Orthobiologics: Osteoconduction + Osteoinduction = Bone Formation, New Trends in Fracture Care Studies.

Hall J: Zimmer Institute, Parsippany, New Jersey, United States, 24 September 2011. Speaker: Trabecular Metal Reverse Shoulder System Lecture and Cadaver Dissection.

Hall J: Canada Medical Education, Mississauga, Ontario, Canada, 24 November 2011. Speaker and Examiner: Canadian Orthopaedic Resident Review Course - Trauma. Top Ten Things You Need to Know - Wrist Fracture Dislocations.

Hall J: Canada Medical Education, Mississauga, Ontario, Canada, 19 January 2012. Speaker and Examiner: Canadian Orthopaedic Resident Review Course - Adult Reconstruction Shoulder and Elbow.

Hall J: Canadian Orthopaedic Association, Ottawa, Ontario, Canada, 6 June 2012. Speaker: (1) Open Extremity Fractures. (2) Humeral Shaft Fractures - Posterior Approach. (3) Zimmer Reverse Total Shoulder Arthroplasty.

McKee M: Canadian Orthopaedic Association, St. John's, Newfoundland and Labrador, Canada, 3 July 2011. Invited Speaker: How Should New Implants be Monitored in Canada?

McKee M: Ontario Orthopaedic Association Annual Meeting, Toronto, Ontario, Canada, 4 November 2011. Invited Speaker: Distal Humeral Fractures in 2011 Upper Extremity Trauma.

McKee M: AO Trauma Masters Course-Upper Extremity, Davos, Switzerland, 12 December 2011. Invited Lecturer: (1) Scapula, clavicle-AC joint and floating shoulder. Breakout Session. (2) Proximal humerus: 4 part fractures. (3) Humeral diaphyseal, distal metaphyseal and articular surface fractures. Moderator. (4) Post traumatic instability of the elbow. Breakout session.

McKee M: Department of Orthopaedic Surgery Naval Medical Center, San Diego, California, United States, 25 April 2012. Michael T. Mazurek Visiting Professor: Clavicle Fractures in 2012.

McKee M: Academic Day, George Washington University Hospital, Washington, District of Columbia, United States, 10 May 2012. Invited Speaker: (1) Complex Elbow Fracture-Dislocations: How to keep it simple. (2) Clavicle Fractures in 2012: What's new? (3) Fractures of the Distal Humerus: A case-based approach.

McKee M: Canadian Orthopaedic Association, Ottawa, Ontario, Canada, 8-9 June 2012. Presenter: (1) Operative vs nonoperative treatment of acute dislocations of the acromio-clavicular joint: Results of a multi-centre randomized, prospective clinical trial. (2) Can one surgeon make a difference? A Canadian perspective. (3) Prognostic factors for reoperation following plate fixation of fractures of the midshaft clavicle. (4) Surgical fixation of Vancouver type B1 periprosthetic femur fractures - A systematic review. (5) Prognostic factors for reoperation following plate fixation of fractures of the midshaft clavicle.

Schemitsch E: Canadian Orthopaedic Association, St. John's, Newfoundland, July 2011. (1) The Orthopaedic Journey: A lifetime of opportunity. (2) Trauma: Tibia from top to bottom. (3) Reamed versus unreamed nailing of tibial shaft fractures in patients requiring two or more re-operations: A subgroup analysis of the SPRINT trial.

Schemitsch E: 5th Annual Hip Joint Course, Baltimore, Maryland, United States, August 2011. (1) Custom blocks for hip resurfacing. (2) Biomechanics of hip resurfacing. (3) An evidence based review of outcomes following hip resurfacings. (4) Biomechanics and clinical outcomes of midhead resection arthroplasty. (5) Computer assisted surgery for hip resurfacing.



Schemitsch E: Combined Meeting British and Irish Orthopaedic Association, Dublin, Ireland, September 2011. (1) Presidential Guest Speaker: Current concepts in the management of elbow fractures. (2) Moderator.

Schemitsch E: Case Controversies in Trauma Care, Mississauga, Ontario, Canada, September 2011. (1) Course Co-Chair. (2) Case session leader.

Schemitsch, E: Osteoporosis Focus Inaugural Forum, Mississauga, Ontario, Canada, October 2011. COA Update.

Schemitsch, E: Principles and Practice of Clinical Research, Mississauga, Ontario, Canada, October 2011. (1) Course chair. (2) Moderator. (3) Study protocols. (4) Writing your paper for publication.

Schemitsch, E: Advanced concepts in the principles and practice of Clinical Research, Mississauga, Ontario, Canada, October 2011. (1) Course chair. (2) Moderator. (3) Why surgical research requires advanced training.

Schemitsch E: Combine Meeting New Zealand and Australian Orthopaedic Association, Rotorua, New Zealand, New Zealand, October 2011. Invited Speaker: Current concepts in the management of distal humerus fractures.

Schemitsch E: Osteoporosis Focus Inaugural Forum, Mississauga, Ontario, Canada, November 2011. COA Update.

Schemitsch E: Ontario Orthopaedic Association, Toronto, Ontario, Canada, November 2011. (1) COA update. (2) Periprosthetic femur fractures: Current concepts. (3) Knee trauma. (4) Bone graft substitutes in trauma.

Schemitsch E: Canadian Orthopaedic Resident Review: Trauma, Mississauga, Ontario, Canada, November 2011. (1) Course chair. (2) Moderator. (3) Elbow Trauma.

Schemitsch E: Fragility Fractures, Houston, Texas, United States, December 2011. (1) Moderator. (2) Workshop Leader. (3) Fixation in osteoporotic bone: the locking plate concept. (4) Sliding hip screw vs IM nail: best evidence. (5) Complex distal elbow fractures. (6) Proximal femur fracture: role of locking plate, allograft and cable plate. (7) Panel discussion.

Schemitsch E: Orthopaedic Research Society, San Francisco, California, United States, February 2012. Heterotopic ossification in orthopaedic trauma (1) Moderator and Organizer (2) Treating heterotopic ossification in fracture patients.

Schemitsch E: Canadian Trauma Advisory Council, Toronto, Ontario, Canada, February 2012. Trends in Trauma in Canada.

Schemitsch E: American Academy of Orthopaedic Surgeons, San Francisco, California, United States, February 2012. (1) Instructional course moderator (Periprosthetic fractures) (2) Cable plate vs locking plates for periprosthetic fractures. (3) Nail vs plate for supracondylar periprosthetic fractures. (4) Instructional course lecture: clavicle fractures. (5) Hip paper session moderator.

Schemitsch E: UCSF Clinical Research Course, San Francisco, California, United States, April 2012. (1) Clinical case series (2) Randomized trial (3) Protocol preparation: the essentials (4) How to get IRB approval.

Schemitsch E: 7th Annual San Francisco Orthopaedic Trauma Course, San Francisco, California, United States, April 2012. (1) Advanced radiographic modalities (2) Non op management clavicle & AC joint injuries. (3) Supracondylar humerus fractures. (4) Moderator (5) Panel discussion (6) Lab.

Schemitsch, E: University of Western Ontario Orthopaedic Review, London, Ontario, Canada, May 2012. 1. External reviewer.

Schemitsch E: International Trauma Symposium, Ottawa, Ontario, Canada, June 2012. (1) State of union address (2) Moderator.

Schemitsch E: American Orthopaedic Association, Washington, District of Columbia, United States, June 2012. Poster session moderator.

Schemitsch E: Canadian Orthopaedic Association, Ottawa, Ontario, Canada, June 2012. An analysis of the hip resurfacing failures - Canadian experience.

Waddell JP: Societe Internationale de Chirurgie Orthopedique et de Traumatologie - SICOT, Prague, Czech Republic, 6-8 September 2011.(1) Co-Moderator: Fractures About the Knee. (2) Invited Speaker: Periprosthetic Fractures - Diagnostic & Current Concepts. (3) Invited Lecturer: Early Total Care Instructional Course Lecture: Damage Control in Poly-Traumatized patients. (4) Moderator: Hip - Resurfacing - Cemented THP. (5) Invited Speaker: Indications for Conservative Treatment Instructional Course Lecture: ARTOF & SICOT Trauma Committee - Distal Radius

Waddell JP: International Hip Society, Prague, Czech Republic, 8 September 2011. Presenter: A Prospective Randomized Controlled Trial Comparing Three Alternative Bearing Surfaces in Primary Total Hip Arthroplasty.



Waddell JP: H.I.P. 2011, Toulouse, France, 22 September 2011. (1) Moderator: Arthroplasty Specificities on Patients with SCFE. (2) Invited Speaker: Conducting a Safety Study on the Dual Mobility Cup.

Waddell JP: Combined Australia-New Zealand Orthopaedic Associations Scientific Meeting, Rotorua, New Zealand, 13 October 2011. Presenter: (1) A Prospective Randomized Controlled Trial Comparing Three Alternative Bearing Surfaces in Primary Total Hip Arthroplasty. (2) The Effect of Radiographic Osseointegration of Geometric Variations in Acetabular Component Design. (3) A Biomechanical Comparison of Epiphyseal Versus Metaphyseal Fixed Conservative Hip Arthroplasty. (4) Radiographic Evidence of CAM type Femoroacetabular Impingement in Young Adults with Hip Osteoarthritis.

Waddell JP: Aseptic Surgery Forum, Paris, France, 4 April 2012. Invited Speaker: Impregnated Cement for Antibiotic Therapy.

Waddell JP: 14th International Biolox Symposium, Las Vegas, Nevada, United States, 19 May 2012. (1) Invited Speaker: Wear Measurement of Hard Surfaces. (2) Co-Moderator: Bearing Surface Problems in THA.

Waddell JP: European Federation of National Associations of Orthopaedics & Traumatology (EFORT), Berlin, Germany, 23 May 2012. Speaker: Indication, Mono-, Bipolar and Total Replacement ARTOF (Association for the Rational Treatment of Fractures) Symposium: Primary & Secondary Joint Replacement After Fractures: Proven Principles & New Options. (1) The Effect of Radiograhic Osseointegration of Geometric Variations in Acetabular Component Design. (2) Radiographic Evidence of Pincer-Type Femoroacetabular Impingement in Patients with End Stage Hip Osteoarthritis.

Waddell JP: 9th Central European Orthopaedic Congress (CEOC), Portoroz, Slovenia, 21-22 June 2012. (1) Invited Speaker: Conservative Therapy: Reduction and Splinting ARTOF Fractures of the Distal Tibia and Ankle. (2) Invited Surgical Instructor: Fractures of the Distal Tibia and Ankle: Theoretical Session. (3) Invited Lecturer: Outcome of Revision Total Hip Arthroplasty Using the Echelon Revision Stem.

Waddell, JP: Canadian Orthopaedic Association, St. John's, Newfoundland and Labrador, Canada, 7 July 2011. Moderator: Instructional Course Lecture: Intelligent Financial Planning - Use Your Tax Savings to Build a Bigger Pile of Savings.

Waddell, JP: McMaster University, Division of Orthopaedic Surgery, Hamilton, Ontario, Canada, 28 March 2012. Visiting Professor: A Snapshot of Orthopaedic Care in Ontario: The Changing Landscape.

Waddell, JP: Canadian Orthopaedic Association, Ottawa, Ontario, Canada, 8 June 2012. (1) Co-Moderator: Adult Knee Reconstruction. (2) Invited Speaker: Creating a Service Focused Practice - Selecting the Right Educational Programs and Resources for Patients, Including Ortho Connect. (3) Presenter: The Patient Experience: From Referral to Surgery. (4) Invited Speaker: Easing the Surgeon's Day in Practice - Foundation and Resource Overview.

Waddell, JP: Canadian Neuromodulation Society, Jackson's Point, Ontario, Canada, 16 June 2012. Invited Speaker: Device Registries - Lessons From The Canadian Joint Replaclement Registry.

Whelan, D: Canadian Orthopedic Association, Ottawa, Ontario, Canada, June 2012. Presenter: Sports Symposium: Graft Choice in ACL Reconstruction - Evidence Based Guidelines.

### RESEARCH AND INVESTIGATIONS

### **Peer-Reviewed Grants**

A controlled, Human clinical trial to evaluate the postoperative Pharmacokinetic profile of the recombinant human platelet-dervivd growth factor-BB (rhPDGF-BB) in "Augment(R) Bone Graft" in Foot and Ankle Fusions. Daniels TR: BioMimetic Therapeutics Inc. (\$25,000 USD 2011).

A Multicentre, Randomized Trial of Conservative Treatment Versus Operative Plate Fixation for Acute, Displaced Fractures of the Distal Clavicle. Hall JA, Canadian Orthopaedic Trauma Society: Orthopaedic Trauma Association (The) (OTA). (\$80,000 2010 - 2012).

A Multicentre, Randomized Trial of Conservative Treatment vs. Operative Plate Fixation for Acute, Displaced Fractures of the Distal Clavicle. Hall JA, Schemitsch EH, Canadian Orthopaedic Trauma Society: Physicians Services Incorporated Foundation (The) (PSI). (\$106,000 2010 -2012).

A Multicentre, Randomized Trial of Simple Decompression vs. Anterior Transposition of the Ulnar Nerve for Acute, Displaced Fractures of the Distal Clavicle. Schemitsch EH, Hall JA, McKee MD, Canadian Orthopaedic Trauma Society: Orthopaedic Trauma Association (The) (OTA). (\$78,630 2010 -2013).



A prospective randomized controlled mulitcentre pivotal human clinical trial to evaluate the safety and effectiveness of Augment injectable bone graft compared to autologous bone graft as a bone regeneration device in hindfoot fusions. Daniels TR: BioMimetic Therapeutics Inc. (\$200,000 USD 2011 -2012).

A Randomized Clinical Trial Comparing Late versus Early Physiotherapy Start Times Following Multi-Ligamanet Reconstruction for Knee Dislocation (Co-LEAP). Whelan DB, Ravi B: Physicians Services Incorporated Foundation (The) (PSI). (\$68,000 2011 - 2013).

A Randomized Evaluation of Emergent Immobilization in External Rotation in the Management of Acute Interior Dislocations of the Shoulder (EERAADS). Whelan D: American Orthopaedic Society for Sports Medicine. (\$20,000 2010 - 2012).

A Randomized Evaluation of Immobilization in External Rotation in the Management of Acute Interior Dislocations of the Shoulder (ERAADS). Whelan D: American Shoulder and Elbow Surgeons.  $($20,000\ 2010\ -\ 2012).$ 

A randomized trial of cannulated screws vs sliding hip screws for femoral neck fractures. Schemitsch E: Canadian Institutes of Health Research (CIHR), FAITH Investigators. (\$1,780,737 2010 -2014).

A randomized trial of fluid lavage in open wounds. Schemitsch E: Canadian Institutes of Health Research (CIHR), FLOW Investigators. (\$1,748,487 2009 -2013).

A randomized trial of hemiarthroplasty vs total hip arthroplasty for femoral neck fractures. Schemitsch E: National Institutes of Health (NIH) (USA), HEALTH Investigators. (\$540,708 USD 2008 -2012).

An academic hip arthroplasty fellowship. Schemitsch E, Waddell J: OMEGA Foundation. (\$150,000 2011 - 2013).

AO Spine North American SpineNET Knowledge Forum. Fehlings M, Ahn H: AO Spine NET Group, Orthopaedic Research and Education Fund. (\$110,000 2011 -2012).

Bone marrow-derived stem cell-based gene therapy to accelerate fracture healing. Ahn H, Aubin I, Li R, Nauth A: Canadian Institutes of Health Research (CIHR). (\$293,268 2011 -2014).

Cartiva Implant for hallux rigidus. Daniels TR: Carticept Medical, Inc. (\$42,000 USD 2011).

Evaluation of a novel scaffold treatment with VEGF for fracture healing. Schemitsch E, Li R: Orthopaedic Trauma Association. (\$25,000 2011 -2013).

Expansion of a chiropody rapid response service. Ray J, Schemitsch E: Ministry of Health and Long Term Care. (\$56,184 2011 -2012).

Functional and radiological outcome analysis of the STAR and Hintegra total ankle prostheses. Daniels TR: Integra Life Sciences. (\$80,000 2011 - 2012).

Instrumental activities of daily living and social roles following hip and knee replacement: Understanding why people's engagement doesn't change. Davis A, Webster F, Jaglal S, Jenkinson R, Perruccio A, Waddell JP, Schemitsch E: Arthritis Society (The). (\$360,000 2011 -2014).

Latissimus Dorsi Tendon Transfer: A Cadaveric Study. Henry P, McKee MD: University of Toronto. (\$12,500 2012 - 2013).

MOHLTC Osteoporosis Fracture Clinic Screening Evaluation - Year 4. Beaton DE, Bogoch ER, Jaglal S, Hawker G, Mamdani M, Gignac M, Cadarette S, Laupacios A, Zwarenstein M, Straus S, Sale J, Jiang D: Ontario Ministry of Health and Long-Term Care. (\$350,000 2010 - 2012).

Operative vs. Non-Operative Treatment of Acute Unstable Chest Wall Injuries - A Multicentered RCT. McKee MD, Schemitsch EH, Hall JA, Canadian Orthopaedic Trauma Society: AO Foundation.  $($119,137\ 2012 - 2014).$ 

Optimization of the delivery of fracture secondary prevention program. Bogoch ER: Warner Chilcott. (\$30,000 2012).

ORIF vs non-operative treatment for unstable chest wall injuries. A randomized multi centre clinical trial. McKee MD, Dehghan N, Nauth A, Schemitsch EH: AO Foundation. (\$120,000 2012

Osteoporosis Exemplary Care Program. Bogoch ER: Helen McCrea Peacock Foundation. (\$9,000 2012).

Partnership for applied research in fracture prevention programs for the elderly. Gaboury I, Beaulieu MC, Bogoch E, Boire G, Cabana F, Corriveau H, Dagenais P: Canadian Institutes of Health Research (CIHR), Meetings Planning and Dissemination Grant. (\$14,685 2011 - 2012).



Patients' perspectives on total ankle arthroplasty: A qualitative study exploring pre- and postoperative experiences. Daniels TR, Beaton D, Pinsker E, Sale J: Physicians Services Incorporated Foundation (The) (PSI). (\$48,156 2011 -2013).

Reamer Irrigator Aspirator (RIA) versus Autogenous Iliac Crest Bone Graft (ACIBG) for the Treatment of Non-unions: A Multicentre Randomized Trial. Nauth A, Schemitsch EH, Hall JA, McKee MD, Canadian Orthopaedic Trauma Society: AO Foundation. (\$130,000 2012 -2014).

Reamer Irrigator Aspirator (RIA) versus Autogenous Iliac Crest Bone Graft for the Treatment of Non-unions: A Randomized, Multicentre, Clinical Trial. Schemitsch EH, Nauth A, Hall JA, McKee MD, Canadian Orthopaedic Trauma Society: Orthopaedic Trauma Association (The) (OTA). (\$79,500 2011 -2014).

Rick Hansen Spinal Cord Injury Registry. Ahn H, Ginsberg H, Fehlings M, Ford M: Spinal Cord Injury Solutions Network. (\$120,000 2009 - 2012).

Rick Hansen Spinal Cord Injury Registry Grant. Ahn H, Ginsberg H: Rick Hansen Institute, Rick Hansen Spinal Cord Injury Renewal Grant. (\$120,000 2011 -2014).

Rick Hansen Spinal Cord Injury Registry Group: Access To Care and Timing for Spinal Cord Injury. Ahn H: Rick Hansen Institute. (\$17,200 2011 -2012).

Study to optimize the delivery of fracture secondary prevention. Bogoch ER: Novartis Canada Ltd. (\$20,000 2012).

Study to optimize the delivery of fracture secondary prevention program. Bogoch ER: Amgen Canada Inc (Mississauga, ON). (\$10,000 2012).

The effect of late type endothelial progenitor cells on augmentation of angiogenesis and osteogenesis in a segmental bone defect model. Schemitsch EH, Li R: Orthopaedic Trauma Association (The) (OTA). (\$25,000 2010 - 2012).

The use of endothelial progenitor cells (EPCs) for fracture healing in a diabetic fracture model. Lin C, Schemitsch EH: Orthopaedic Trauma Association. (\$10,000 2011 - 2013).

Treatment decisions in elderly persons with traumatic spinal cord injury (TSCI). Ahn H: Rick Hansen Institute Spinal Cord Grant. (\$20,000 2011 - 2012).

Treatment of hallux rigidus: fusion or hemiarthroplasty - randomized trial. Daniels TR, Khan R: Carticept Medical, Inc. (\$30,000 USD 2011).

What are fracture patients' understanding of risk of future fracture? Sale I, Beaton D, Bogoch E, Gignac M, Hawker G: Canadian Institutes of Health Research (CIHR). (\$150,738 2012 - 2014).

### **HONOURS RECEIVED**

Bogoch ER: 25 Most Popular Scientific JHS Articles in 2010, Journal of Hand Surgery, Canada. JHS Select. 2012.

Daniels T: The COA award of merit, Canadian Orthopaedic Association (COA). 2011.

Daniels T: The Mann Award, AOFAS, San Diego, California, United States. 2012.

Daniels T: Jameel Ali Continuing Education Award, Dept of Surgery, Faculty of Medicine, University of Toronto. Continuing Education. 2011.

Daniels T: Orthopaedic Chair's Teaching Award, Orthopaedic Surgery, Dept of Surgery, Faculty of Medicine, University of Toronto. 2011.

McKee M: Award of Excellence, Canadian Orthopaedic Association, Canada. 2011 - 2012.

Schemitsch E: Meeting Best Podium Paper Award, European Federation of Orthopaedics and Trauma (EFORT) 2011.

Schemitsch E: President, Canadian Orthopaedic Association. 2011.

Schemitsch E: Fellowship Day Lecturer, University of Calgary. 2011.

Whelan D: 2011 AOSSM Traveling Fellowship Program, American Orthopaedic Society for Sports Medicine. 2011.



## Division of Plastic and Reconstructive Surgery

Dr. J.L. Mahoney Professor (Division Head) Dr. M.A. Musgrave Assistant Professor

### **PUBLICATIONS**

#### **Journal Articles**

Chin JWS, Teague L, McLaren AM, Mahoney LJ: Non traumatic lower extremity amputations in young patients: an 11-Year retrospective study. International Wound Journal: 2012 Jun; 10:1-7.

Fawzi H, Osei-Tutu K, Errett I, Latter D, Bonneau D, Musgrave M, Mahoney J. Sternal plate fixation for sternal wound reconstruction: inital experience (Retrospective study). Journal of Cardiothoracic Surgery: 2011; 6:63.

Pham BA, Teague L, Mahoney J, Goodman L, Paulden M, Poss J, Li J, Sikich NJ, Lourenco R, Ieraci L, Carcone S, Krahn M: Support surfaces for intraoperative prevention of pressure ulcers in patients undergoing surgery: A cost-effectiveness analysis. Surgery: 2011 Dec; 150(1): 122-132.

Rizis D, Mahoney JL. A rare presentation of flexor digitorum profundus type V avulsion injury with associated intra-articular fracture: A case report. The Canadian Journal of Plastic Surgery: 2011; 19(2): 62.

### **INVITED VISITS**

Mahoney JL: IPRES, Vancouver, British Columbia, Canada, 2011. A Retrospective Look at the Plastic Surgery Patient's Ability to Accurately Detect Surgical Site Infection in a Post-dischare

Mahoney JL: Wound Care Society, SAWC - the Symposium of Advance Wound Care, Orlando, Florida, USA, 2011. Incidence and risk factor for clinical complications at saphenous vein graft harvesting sites following aorto-cornary bypass surgery procedures.

### RESEARCH AND INVESTIGATIONS

Development of a Diabetic foot Website. Mahoney JL, Sargeant R: J.P. Bickell Foundation. (\$20,000 2011).

Exploring Factors that Influence Breast Reconstruction Use and Outcomes: Phase I: How do Physician Attributes Influence Reconstruction Decision Making. Musgrave MA, Gagliardi A, Baxter N: Canadian Breast Cancer Foundation (CBCF). (\$188,180 2011 - 2013).

Utilization and Timing of Breast Reconstruction in the Treatment of Breast Cancer in Ontario: A Population-Based Study. Zhong T, Baxter N, Hofer S, Urbach D, Sutradhar R, Musgrave MA: Canadian Breast Cancer Foundation (CBCF). (\$257,474 2011 - 2014).

Wounds and Surgical Site Infections: Development of a Web-based tool for Patient Education. Musgrave MA, Mahoney JL: Ontario Ministry of Health and Long-Term Care, Innovation Fund. (\$4,871 2011 - 2012).

### **HONOURS RECEIVED**

Mahoney, JL: The Society of Advanced Wound Care - A needs Assessment of Intervention to reduce the Risk of Wound Complications following Saphenous Vein Harvesting, 2011- 2nd place young investigators award

Musgrave MA: Donald J. Currie Award for Undergraduate Education, St. Michael's Hospital, Toronto, Ontario. 2011.

Musgrave, Melinda Anne: FitzGerald Academy Clerkship Teaching Award, St. Michael's Hospital, Toronto, Ontario. 2011.



### **Division of Urology**

Dr. R.J.D. Honey Professor (Division Head)

Dr. J.Y. Lee Lecturer

Dr. K. Pace Associate Professor Dr. R.J. Stewart Assistant Professor

### **PUBLICATIONS**

Chew BH, Arsovska O, Lange D, Wright JE, Beiko DT, Ghiculete D, Honey JR, Pace KT, Paterson RF. The Canadian StoneBreaker Trial. A Randomized, Multicenter Trial Comparing the LMA StoneBreaker'99 and the Swiss LithoClast('ae) During Percutaneous Nephrolithotripsy. Journal of Endourology: 2011 Sep: 25(9): 1415-1419.

Fendler A, Jung M, Stephan C, Honey RJ, Stewart RJ, Pace KT, Erbersdobler A, Samaan S, Jung K and Yousef GM. miRNAs can predict prostate cancer biochemical relapse and are involved in tumor progression. Int J Oncol: 2011 Nov; 39(5):1183-1192.

Foell K, Ordon M, Ghiculete D, Honey RJ, Pace KT. Does a routine baseline plain radiograph influence the need for subsequent imaging studies in patients with ureteral calculi? Canadian Urological Association Journal: 2012 Jun; 6(3Suppl1): S23.

Foell K, Ordon M, Ghiculete D, Wiesenthal JD, Honey RJD, Pace KT. A comparison of extracorporeal shock wave lithotripsy with an electro-hydraulic unit vs. an electromagnetic unit. Journal of Endourology: 2011 Nov; 25 (Supplement 1): A150.

Foell K, Wiesenthal JD, Ng EH, Ordon M, Ray AA, Ghiculete D, Pace KT, John Honey **RDA.** The relative renal anatomy in the prone-flexed position for percutaneous nephrolithotomy: a proof of concept for our modified position. Journal of Endourology: 2011 Nov; 25 (Supplement 1):

Foell K, Honey RJD, Wiesenthal JD, Ghiculete D, Ordon M, Pace KT. A prospective study examining the incidence of bacteruria and urinary tract infection post-shock wave lithotripsy. Journal of Endourology: 2011 Nov; 25 (Supplement 1): A148.

Honey RJ, Wiesenthal JD, Ghiculete D, Pace S, Ray AA, Pace KT. Comparison of supracostal versus infracostal percutaneous nephrolithotomy using the novel prone-flexed patient position. Journal of Endourology: 2011: 25(6): 947-954.

Khella HW, White NM, Faragalla H, Gabril M, Boazak M, Dorian D, Khalil B, Antonios H, Bao TT, Pasic MD, Honey RJ, Stewart R, Pace KT, Bjarnason GA, Jewett MA, Yousef GM. Exploring the role of miRNAs in renal cell carcinoma progression and metastasis through bioinformatic and experimental analyses. Tumour Biol: 2012 Feb; 33(1):131-140.

Klinghoffer Z, Tu HYV, Pace KT. Cost-effectiveness of shock wave frequencies of 60 versus 120 shocks per minute for upper ureteral stones: ecomonic analysis of a randomized, double-blinded trial. Canadian Urological Association Journal: 2012 Jun; 6(3Suppl1): S4.

Lee JY, Mucksavage P, Kerbl DC, Huynh VB, Etafy M, McDougall EM. Validation Study of a Virtual Reality Robotic Simulator: Role as an Assessment Tool? J Urol: 2012 Mar; 187(3):998-1002.

Lee JY, Skarecky DW, Ahlering TE. Chapter 24 - Robotic-Assisted Radical Prostatectomy. Smith's Textbook of Endourology (3rd Edition). A. Smith, G. Badlani, G.M. Preminger, L.R. Kavoussi (Eds); Wiley-Blackwell (January 2012).

Lee JY, McDougall EM. Chapter 2 - Stepwise Approach to Training for Robotic Surgery and Credentialing. Robotic Pediatric and Reconstructive Urology: A Comprehensive Guide. Mohan S Gundeti (Ed); Wiley-Blackwell (February 2012).

Mucksavage P, Kerbl DC, Lee JY. The da Vinci <sup>®</sup> Surgical System Overcomes Innate Hand Dominance. J Endourol: 2011 Aug; 25(8):1385-1388.

Mucksavage P, Pick D, Haydel D, Etafy M, Kerbl DC, Lee JY, Ortiz-Vanderdys C, Saleh F, Olamendi S, Louie MK, McDougall EM. An In vivo evaluation of a novel spiral cut flexible ureteral stent. Urology: 2012 Mar; 79(3):733-737.

Ordon M, Ghiculete D, Wiesenthal JD, Honey RJD, Pace KT. Does the Type of Shockwave Lithotripter Matter: A Comparison of an Electrohydraulic Unit vs. an Electromagnetic Unit. Canadian Urological Association Journal: 2011 Oct; 5 (5Suppl3): S203.



Ordon M, Ghiculete D, Stewart R, Pace KT, Honey RJ. Prophylactic vs. selective ureteral stenting in preventing ureteric complications post renal transplant: a retrospective review. Canadian Urological Association Journal: 2012 Jun; 6(3Suppl1):S35.

Ordon M, Saskin R, Mamdani, M, Urbach, D, Honey RJ, Pace KT. Surgical management of kidney stone diseae: a population-based time series. Canadian Urological Association Journal: 2012 Jun; 6(3Suppl1): S3.

Ordon M, Ghiculete D, Pace KT, Honey RJ. Does the Radiologic Technologist or the Fluoroscopy Time Affect Treatment Success with Shockwave Lithotripsy? Journal of Endourology: 2012 Apr 16. [Epub ahead of print]

Ordon M, Schuler TD, Honey RJ. Ureteral avulsion during contemporary ureteroscopic stone management: "The Scabbard Avulsion". Journal of Endourology: 2011 Aug; 25(8): 1259-1262.

Ray AA, Ghiculete D, Honey RJ, Pace KT. Shock Wave Lithotripsy (SWL) in Patients with Horseshoe Kidney (HSK): Determinants of Success. Journal of Endourology: 2011; 25(3): 487-493.

Romao R, Foell K, Figeuroa VH, Lorenzo A, Farhat W, Pace KT, Bagli D, Koyle M, Honey RJ, Pippi Sall JL. Spectrum of ureteropelvic junction obstruction (UPJO) morphological characteristics from infancy to adulthood and implications in surgical management. Canadian Urological Association Journal: 2012 Jun; 6(3Suppl1):93.

Satkunasivam R, Keays M and Pace KT. Renal colic and urolithiasis practice patterns in Canada: a survey of Canadian Urological Association members. Can Urol Assoc J: 2011 Oct; 5(5):324-327.

White NM, Bao TT, Grigull J, Youssef YM, Girgis A, Diamandis M, Fatoohi E, Metias M, Honey RJ, Stewart R, Pace KT, Bjarnason GA, Yousef GM. miRNA profiling for clear cell renal cell carcinoma: biomarker discovery and identification of potential controls and consequences of miRNA dysregulation. Journal of Urology: 2011; 186(3): 1077-1083.

White NM, Khella HW, Grigull J, Adzovic S, Youssef YM, Honey RJ, Stewart R, Pace KT, Bjarnason GA, Jewett MA, Evans AJ, Gabril M and Yousef GM. miRNA profiling in metastatic renal cell carcinoma reveals a tumor-suppressor effect for miR-215. Br J Cancer: 2011 Nov; 105(11): 1741-1749.

Wiesenthal J, Schuler TD, Honey RJ, Pace KT. Predictors of Health-Related Quality of Life Recovery Following Laparoscopic Simple, Radical and Donor Nephrectomy. British Journal of Urology: 2011: 107(4): 307-313.

Wiesenthal JD, Fazio LM, Perks AE, Blew BD, Mazer D, Hare G, D'A Honey RJ, Pace KT. Effect of pneumoperitoneum on renal tissue oxygenation and blood flow in a rat model. Urology: 2011: 77(6): 1508.

Wiesenthal JD, Ghiculete D, D'A Honey RJ, Pace KT. A comparison of treatment modalities for renal calculi between 100 and 300 mm2: are shockwave lithotripsy, ureteroscopy, and percutaneous nephrolithotomy equivalent? Journal of Endourology: 2011: 25(3): 481-485.

Wiesenthal JD, Ghiculete D, Ray AA, Honey RJ, Pace KT. A clinical nomogram to predict the successful shock wave lithotripsy of renal and ureteral calculi. Journal of Urology: 2011 Aug; 186(2): 556-562.

Wiesenthal JD, Ghiculete D, Ordon M, Pace KT, Honey RJD. The Case Against Universal Antibiotic Prophylaxis With Shockwave Lithotripsy: A Prospective Study Examining the Incidence of Bacteriuria and Urinary Tract Infection. Canadian Urological Association Journal: 2011 Oct; 5 (5Suppl3): S203.

### **INVITED VISITS**

Honey RJD: Annual American Urolgoical Association, Atlanta, Georgia, United States, 20 May 2012. (1) Facilitator: (a) Flexible Ureteroscopy for Renal Stones. (b) Stone disease: new technology/ SWL, ureteroscopic or percutaneous stone removal. (2) Course Director: Hands-on Course. (3) Moderator: IV Moderated Poster Session 68.

Pace K: Annual Meeting of the Northeastern Section of the American Urological Association, New Orleans, Louisiana, United States, October 2011. Moderator: Poster Session V - Renal Transplant, Laparoscopy & Female Urology.

Pace K: Chicago, Illinois, United States, November 2011. Invited Speaker: Canadian Update in Surgical Procedures.

Pace K: World Congress on Endourology, Kyoto, Japan, December 2011. Invited Speaker: Adrenal and Upper Urinary Tract Video Session.



Pace K: Canadian Urological Association, Calgary, Alberta, Canada, June 2012. Invited Speaker: Fifth Annual Basic and Advanced Laparoscopic Skills Course Entering the Hostile Abdomen and Dealing with Intraoperative Complications.

### RESEARCH AND INVESTIGATIONS

Trends over time and regional variation in the management of kidney stone disease in the province of Ontario. Pace KT, Ordon M, Honey RJ: Ontario AFP, Innovation Funds. (\$15,864 2011 - 2013).

### **HONOURS RECEIVED**

Honey RJD: Best Endourology Poster, Annual Meeting of the Canadian Urological Association, Montreal, Quebec, Canada. 2011.

Honey RJD: Five Star Best Poster in Session, Annual Meeting of the Canadian Urological Association, Montreal, Quebec, Canada. 2011.

Honey RJD: Best Endourology/Stone Paper, World Congress of Endourology and SWL. 2011.

Lee JY: Best MHPE 501 Core Paper Award, University of Illinois at Chicago, Chicago, Illinois. 2011.

Pace K: Best reviewer, Journal of Endourology. 2011.

Pace K: Best poster, Annual meeting of the European Association of Urology (EAU), Vienna, Austria. 2011.

Pace K: Best Endourology Presentation, Annual meeting of the Canadian Urological Association, Montreal, Quebec. 2011.

Pace K: Five star Best Poster in session, Annual meeting of the Canadian Urological Association, Montreal, Quebec. 2011.

Pace K: Best poster presentation, Annual research day of the University of Toronto HPME. 2011.

Pace, Kenneth: Urology Residents Clinical Teaching Award, Urology, Dept of Surgery, Faculty of Medicine, University of Toronto. Postgraduate MD. 2011.



### Division of Vascular Surgery

Dr. F.M. Ameli Associate Professor (Division Head)

Dr. V. Campell **Assistant Professor** Dr. A.G. Lossing Associate Professor Dr. A. Moloney **Assistant Professor** Dr. T. Tanner **Assistant Professor** Dr. M. Wheatcroft Assistant Professor

### **INVITED VISITS**

Lossing AG: E-Health, Vancouver, British Columbia, Canada, 28 May 2012. Speaker: Evaluation of Physician Adoption Techniques for Telemedicine.

### **HONOURS RECEIVED**

Campbell V: William Horsey Post-Graduate Teaching Award, Dept of Surgery, Faculty of Medicine, St. Michael's Hospital. 2011.

University of Toronto | Department of Surgery



# Sunnybrook Health Sciences Centre

Robin Richards, Surgeon-in-Chief

### **HEADS OF DIVISION**

Dr. S. Fremes Cardiac and Vascular Surgery

Dr. N. Coburn
Dr. M. Schwartz
Dr. H. Kreder
Dr. P. Binhammer
General Surgery
Neurosurgery
Orthopaedics
Plastic Surgery

Dr. R. Kodama Urology

uring 2011 – 2012 the Sunnybrook Department continued to grow and benefit from alignment with the Institutional strategic plan. The "Drive to 95 (percent occupancy)" reduced occupancy to acceptable levels allowing the more reliable provision of surgical care. The Department benefited from recruitment in strategic areas in a challenging resource environment.

### **RECRUITMENT**

Manuel Dibildox was appointed as a Surgeon-Investigator in the Division of Plastic Surgery with special expertise and interest in acute burn care, critical burn care, and reconstructive burn care within the Trauma, Emergency and Critical Care Medicine Program. Paul Karanicolas was appointed as a Surgeon-Scientist in the Division of General Surgery with special interest in hepatobiliary cancer management and health services research and clinical trials in surgical and hepatobiliary oncology. Avery Nathens was recruited as Sunnybrook's next Surgeon-in-Chief.

### **DEPARTURES**

Jean Francois Boileau announced his departure for an academic position in Montreal. Sherif Hanna completed his term as Director of Surgical Oncology having organized the establishment of the Hanna Family Research Chair in Surgical Oncology. Andy Smith completed a very successful term as Head of the Division of General Surgery.

## DIVISION OF CARDIAC AND VASCULAR SURGERY

The Division focused its activities on long-term outcome studies following valve replacement and cardiac revascularization, minimally invasive interventions, educational research and patient safety. Stephen Fremes was appointed as the inaugural Dr. Bernard S. Goldman

Chair in Cardiovascular Surgery. Robert Maggisano was named Inaugural Chair in Vascular Surgery to enhance the development and evaluation of less invasive image-guided interventions. Giuseppe Papia received the Marvin Tile Distinguished Service Award at the Harrison dinner in June.

#### **DIVISION OF GENERAL SURGERY**

Division members work in the fields of surgical oncology or trauma care. All Division members contribute to the acute care service which provides a positive learning environment for trainees and excellent continuity of care for patients. The Division's academic interests include the determinants of outcome following surgical intervention for abdominal malignancy, innovative imaging techniques for the management of breast cancer, the role of transfusion in the management of trauma and the development of standardized protocols for surgical management.

Natalie Coburn was appointed Head of the Division and Clinical Leader for Quality and Patient Safety in the Division. Homer Tien directed Sunnybrook's Trauma Centre. Homer received the Order of Military Merit by the Governor-General at Rideau Hall. Darlene Fenech co-directed the MMMD second year course for undergraduate medical students. Sandro Rizoli was promoted to full Professor recognizing his contributions to the management of hemorrhagic shock. Natalie Coburn was promoted to Associate Professor in recognition of her contributions to improving outcomes of surgery for gastro-intestinal malignancies. Homer Tien was promoted to Associate Professor in recognition of his contribution to trauma management. Calvin Law was appointed Head of Surgical Oncology in the Odette Cancer Program. Fred Brenneman organized a fundraiser to benefit research and innovation in abdominal wall reconstruction in cooperation with the Foundation.

University of Toronto | Department of Surgery 2011-2012 Annual Report | **138** 



### **DIVISION OF NEUROSURGERY**

The Division provides support for the trauma, cancer and brain science programs. A cooperative program with Imaging optimizes treatment for patients with intracerebral aneurysms.

### **DIVISION OF ORTHOPAEDIC SURGERY**

This large Division has interests in joint replacement, the management of orthopaedic trauma, the provision of spine care and soft tissue reconstruction. The surgical program funded by the WSIB for patients with shoulder, elbow, hip, knee and spine problems continued to grow. Cari Whyne was promoted to full Professor recognizing her contributions to orthopaedic biomechanics. Albert Yee was selected as one of two 2013 ABC Travelling Fellows by the Canadian Orthopaedic Association. Hamilton Hall was recognized by the Board for forty years of service to the Institution. David Stephen was active in the Post Graduate Support/Fellowship Committee of AOTrauma North America.

### **DIVISION OF PLASTIC SURGERY**

Division members focus their activities in the areas of burn care, craniofacial deformity and trauma, and hand trauma. Jeff Fialkov was promoted to Associate professor in recognition of his contributions to the surgical management of craniofacial trauma. Marc Jeschke received the Marvin Tile Distinguished Service Award at the December Harrison dinner.

#### DIVISION OF UROLOGY

The Division focuses its activities on urologic oncology, including survivorship issues, female urology and urethral reconstruction. The Division initiated a cooperative robotic surgical program located at the Toronto East General Hospital. Robert Nam was elected President of the Medical Dental Midwifery Staff Association and joined the Board of the hospital. Rob was appointed to the Ajmera Family Chair in Urologic Oncology to pursue his interest in the molecular genetics of prostate cancer. Sender Herschorn chaired the Departmental Promotions Committee.

### **EDUCATIONAL ACTIVITY AND AWARDS**

Sunnybrook appointed Joshua Tepper (former Assistant Deputy Minister of Health) Vice President of Education. Dr. Tepper spoke eloquently to the fourth year medical students at their pre-convocation ceremony about choices the graduates of our medical school will face in their careers and the impact they would have on the lives of their patients. Darlene Fenech received the Surgical Oncology Teaching Award. George Christakis was recognized by Sunnybrook for his outstanding contributions as a Faculty member. John Murnaghan received the Donald Richard Wilson award for excellence integrating CanMEDS roles into a Royal College Training Program. Fred Brenneman and Giuseppe Papia were nominated for Sunnybrook Education Advisory Council Awards. Cari Whyne and Albert Yee received the Charles Tator Award at Gallie Day for supervising graduate students.

George Christakis was appointed Departmental Director of Undergraduate Education. George also received the Bernard Goldman award. Ron Kodama was appointed pre-clerkship coordinator for the University

Department. Andy Smith directed and Fred Brenneman, Darlene Fenech, Paul Karanicolas, Calvin Law, Ted Ross, Homer Tien, Lorraine Tremblay and Frances Wright participated in the 52nd Annual Update in General Surgery. Albert Yee, Veronica Wadey and Robin Richards were selected by the graduating residents as being most influential in their training. Adrienne Weeks (Neurosurgery), Nathan Zilbert (General Surgery) and Kevin Koo (Orthopaedics) received Harrison Teaching

#### **RESEARCH ACTIVITY AND AWARDS**

Colonel Homer Tien was awarded the Canadian forces Major Sir Frederick Banting MD RCAMC Term Chair in Military Trauma Research. Marc Jeschke was awarded CIHR funding for five years. Natalie Coburn received multi-year CIHR funding for an evaluation of interventions for gastric cancer. Diane Nam received a New Investigator Award from the Orthopaedic Research Society. Fred Brenneman and Sandro Rizoli received AFP Innovation funding for studies of abdominal wall reconstruction and transfusion decision-making. Paul Karanicolas received funding from Colon Cancer Canada for research on quality of life following resection of colorectal cancer.

Albert Yee received the prestigious Eduard Samson award from the Canadian Orthopaedic Foundation for his work on the treatment of spinal metastasis. Victor Lo (supervised by Cari Whyne, Albert Yee and Margarete Akens) received the Founders' Medal of the Canadian Orthopaedic Research Society. Cari Whyne and Hans Kreder organized a research program focusing on the translation of science to practice changes in the Holland Musculoskeletal Program. Richard Jenkinson, John Murnaghan and Joel Finkelstein spoke at the symposium. Calvin Law and Paul Karanicolas spoke at the 6th Annual Cancer Research Day organized by Andy Smith and the Odette Cancer Program.

### CONCLUSION

Sunnybrook surgeons value the support of the Institution in creating a rich surgical environment for the provision of patient care, teaching and research. Department members also appreciate the opportunity to provide leadership in our University Department and our Faculty. The Department recognizes and relishes the opportunity it has to provide specialized surgical care to patients from the Toronto Central Local Health Integrated Network, our surrounding Local Health Integrated Networks and the Province.

On a personal note it has been an extraordinary privilege to lead the Sunnybrook Department of Surgery since September 2001, to recruit new staff and to be involved with the career development of all members of the Department. I will be forever grateful for the experience and wish to thank all who have contributed to the individual success of the members of the Department and its collective accomplishments. Most importantly I wish to thank each member of the Department for the wonderful work they do each and every day.



### Division of Cardiac and Vascular Surgery

Dr. G. Christaki Professor

Dr. G. Cohen Associate Professor Dr. A. Dueck **Assistant Professor** Dr. S. Fremes Professor (Division Head)

DR. B.S. Goldman Professor

**Assistant Professor** Dr. D. Kucey Dr. R. Maggisano Associate Professor

Dr. F. Moussa Lecturer

Dr. G. Papia **Assistant Professor** 

### **PUBLICATIONS**

Bucci C, Geerts WH, Sinclair A, Fremes SE. Comparison of the effectiveness and safety of lowmolecular weight Heparin versus unfractionated Heparin anticoagulation after heart valve surgery. American Journal of Cardiology: 2011; 107(4): 591-594.

Cowan B, Sabri H, Kapralos B, Moussa F, Cristancho S, Dubrowski A. A serious game for Off-Pump coronary artery bypass surgery procedure training. Studies in Health Technology and Informatics: 2011; 163: 147-149.

Cristancho S, Moussa F, Monclou A, Moncayo C, Rueda C, Dubrowski A. A Progressive Simulation - Based Program for Training Cardiac Surgery-Related Skills. Medicine Meets Virtual Reality: 2011; 163: 150-155.

Goldman S, Sethi GK, Holman W, Thai H, McFalls E, Ward HB, Kelly RF, Rhenman B, Tobler GH, Bakaeen FG, Huh J, Soltero E, Moursi M, Haime M, Crittenden M, Kasirajan V, Ratliff M, Pett S, Irimpen A, Gunnar W, Thomas D, Fremes S, Moritz T, Reda D, Harrison L, Wagner TH, Wang Y, Planting L, Miller M, Rodriguez Y, Juneman E, Morrison D, Pierce MK, Kreamer S, Shih MC, Lee K. Radial artery grafts vs saphenous vein grafts in coronary artery bypass surgery: a randomized trial. JAMA: 2011; 305(2): 167-174.

Ko DT, Guo H, Wijeysundera HC, Zia MI, Dzavik V, Chu MW, Fremes SE, Cohen EA, Tu JV. Long-term safety and effectiveness of drug-eluting stents for the treatment of saphenous vein grafts disease: a popluation-based study. JACC Cardiovasc Interv: 2011; 4(9): 965 - 973.

Lamy A, Devereaux PJ, Prabhakaran D, Taggart DP, Hu S, Paolasso E, Straka Z, Piegas LS, Akar AR, Jain AR, Noiseux N, Padmanabhan C, Bahamondes JC, Novick RJ, Vaijyanath P, Reddy S, Tao L, Olavegogeascoechea PA, Airan B, Sulling TA, Whitlock RP, Ou Y, Ng J, Chrolavicius S, Yusuf S, Phil D for the CORONARY Investigators. Off-pump or on-pump coronary-artery bypass grafting at 30 days. New England Journal of Medicine: 2012; 19:366(16):1489-1497.

Laupacis A, Lillie E, Dueck A, Straus S, Perrier L, Burton J, Aviv R, Thorpe K, Feasby T, Spears J. Association between chronic cerebrospinal venous insufficiency and multiple sclerosis: a meta-analysis. Canadian Medical Association Journal: 2011; 183: 1824-1825.

Thabane L, Wells G, Cook R, Platt R, Pogue J, Pullenayegum E, Matthews D, McCready T, Devereaux PJ, Cairns JA, Yusuf S; Canadian Network and Centre for Trials Internationally (CANNeCTIN) Investigators. Canadian-led capacity-building in biostatistics and methodology in cardiovascular and diabetes trials: the CANNeCTIN Biostatistics and Methodological Innovation Working Group. Trials: 2011; 12: 48.

#### **PRESENTATIONS**

Christakis G: Canadian Society of Cardiac Surgeons (CSCS), Canadian Cardiovascular Congress, Vancouver, British Columbia, October 2011. Presenter: (1) Is Your Revision Criteria Appropriate? New Cut-Off Value of Transit Time Flowmetry From Graft Imaging to Improve Patency (GRIIP) Study. (2) Is Sinus Rhythm a Must in Surgical Patients?

Cohen G: Contemporary Cardiac Care Conference, Toronto, Ontario, September 2011. New Approaches to Mitral Valve Repair - MitraClip and Port Access MVR.

Cohen G: Encore Seoul 2011, Seoul, Korea, Republic Of, September 2011. Guest Speaker: (1) Minimally Invasive MV repair. (2) Percutaneous MV repair.

Cohen G: Excellence in Interventional Cardiology XII (EIC), Whistler, British Columbia, December 2011. Presenter: Contemporary MV repair.



Cohen G: 15th Tremblant Interventional Cardiology, Mont Tremblant, Quebec, January 2012. Speaker: (1) CABG vs. PCI: Debate. (2) Early Results of MitraClip.

**Dueck A:** Association for medical education in Europe (AMEE), Annual Scientific Meeting, Vienna, Austria, August 2011. Presenter: Linking pateints' understanding of management of shared decision making: A challenge in continuing health education.

Dueck A: Canadian Society for Vascular Surgery Annual Scientific Meeting, St. John's, September 2011. Presenter: The impact of limited vascular ultrasound studies on clinical decision making in patients with peripheral arterial disease.

Dueck A: Schulich Heart Program, Contemporary Cardiac Care Conference, Toronto, Ontario, September 2011. Presenter: Angioplasty in Multiple Sclerosis: Research and Policy.

Dueck A: Toronto Endovascular Conference, Toronto, Ontario, Canada, March 2012. Presenter: (1) CCSVI and MS: a systematic review. (2) Hybrid Intervention for PAD.

Dueck A: Vascular Imaging Toronto (VITO), Toronto, Ontario, Canada, March 2012. Presenter: (1) CCSVI and MS for the Vascular Lab. (2) Future Directions for Vascular Ultrasound.

Dueck A: Health Canada Panel on Cardiovascular Devices, Toronto, Ontario, Canada, June 2012. Invited Speaker: Use of Devices in CCSVI Teleconference with Health Canada Panel.

Fremes S: 25th Annual Scientific Meeting of the Japanese Coronary Association, Osaka, Japan, December 2011. Invited Lecturer: Early and Late Patency on the Radial Artery and Saphenous Vein (Insights from the Radial Artery Patency Study - RAPS).

Papia G: New Brunswick Operating Room Nurses Annual Meeting, Fredericton, New Brunswick, Canada, April 2012. Invited Speaker: Successful Implimentation of the Surgical Safety Checklist: Challenges and Successes.

Papia G: Canadian Interventional Radiology Association Annual Meeting, Vancouver, British Columbia, Canada, May 2012. Invited Speaker: Tibial Angioplasty and New Concepts in Limb Salvage.

#### RESEARCH AND INVESTIGATIONS

A multi-center, randomized, double-blind, placebo-controlled study evaluating the efficacy, safety and tolerability of 20 mg/kg dose of RO4905417 administered every four weeks for 32 weeks in patients undergoing coronary artery bypass graft surgery (CABG) (P-Selectin CABG - BP 25601). Carrier M, Fremes SE: La Roche. (\$250,000 2011 - 2012).

CABG Off or On Pump Revascularization Study (CORONARY). Lamy A, Yusuf S, Taggart D, Murkin J, Fremes SE: Canadian Institutes of Health Research (CIHR). (\$6,580,411 March 2007 - September 2014).

Canadian Network and Centre for Trials Internationally. Yusuf S, Anand S, Dagenais G, Roberts R, Cairns J, Devereaux P, Connolly S, Dorian P, Cox J, Gerstein H, Fremes SE: Canadian Institutes of Health Research (CIHR) / Canadian Foundation for Innovation. (\$19,582,529 2008 - 2013).

Curcumin to Prevent Perioperative Complications after Elective Abdominal Aortic Aneurysm Repair: a Randomized Controlled Trial. Tobe S, Hladunewich M, Papia G: Canadian Institutes of Health Research (CIHR), Multi Center Study. (\$322,419 2011 - 2015).

Remote ischemic preconditioning in cardiac surgery trial (Remote Impact). Devereaux, P, Fremes SE, Anderson T, Bagshaw S, Boden W, Chrolavicius S, Clase C, Coca S, Finegan B, Garg A, Guyatt G, Jacka M, Karthikeyan G, Lamy A, Lavi R, Legare J, Martin B, Parikh C, Pogue J, Pritzker M, Sessler D, Syed S, Teoh K, Thabane L, Thomas S, Thorlund K, Vanhelder T, Walsh M, Whitlock R, Zimmerman R: Heart and Stroke Foundation of Ontario. (\$483,040 2011 - 2013).

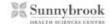
Steroids in cardiac surgery trial (SIRS). Whitlock R, Fremes SE, Quantz M, Ross D, Singal R, Legare J, Brown C, Kieser T, Lamontagne F, Huang K: CANNeCTIN. (\$200,000 2010 - 2015).

SUPERIOR SVG Patency CABG Trial - Surgical and Pharmacological Novel Interventions to Improve Overall Results of Saphenous Vein Graft Patency in CABG Surgery: An International Multi-Center RCT. Fremes S: Heart and Stroke Foundation of Canada (HSFC). (\$290,163 2010 - 2013).

Transfusion Requirements in Cardiac Surgery (TRICSII). Mazer D, Fremes S: Canadian Institutes of Health Research (CIHR). (\$356,466 2011 - 2014).

### **HONOURS AND AWARDS**

Papia, G: Marvin Tile Distinguish Service Award, Department of Surgery, Sunnybrook Health Sciences Centre. June 2012.



### Division of General Surgery

Dr. J.F. Boileau Assistant Professor Dr. F. Brenneman Associate Professor Dr. P. Chu Associate Professor

Dr. N. Coburn Assistant Professor (Division Head)

Dr. D. Fenech **Assistant Professor** Dr. S. Hanna Associate Professor Dr. C. Holloway Associate Professor Dr. P. Karanicolas **Assistant Professor** Dr. C. Law Associate Professor Dr. S. Rizoli Associate Professor Dr. T. Ross Associate Professor

Professor Dr. A. Smith

Dr. H.C. Tien Assistant Professor Dr. L. Tremblay **Assistant Professor** Dr. F. Wright Associate Professor

### **PUBLICATIONS**

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Alolabi N, Alolabi B, Mundi R, Karanicolas PJ, Adachi JD, Bhandari M. Surgical preferences of patients at risk of hip fractures: hemiarthroplasty versus total hip arthroplasty. BMC Musculoskelet Disord: 2011 Dec; 23(12): 289.

Amemiya Y, Yang W, Benatar T, Nofech-Mozes S, Yee A, Kahn, H, Holloway C, Seth, A. Insulin Like Growth Factor Binding Protein-7 Reduces Growth of Human Breast Cancer Cells and Xenografted Tumors. Breast Cancer Research and Treatment: 2011; 126(2): 373-384.

Arjang M, Madani A, Simor A, Smith A, Rizoli S. Surgery or medical management in fulminant Clostridium Difficile colitis. Canadian Journal of Surgery: 2011; 54: S20.

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Baker AJ, Rhind SG, Rizoli SB, Junger W, Cuschieri J, Shek PN, Romaschin AD, Bulger EM. S100B and NSE as predictive biomarkers of outcome in resuscitated TBI patients. Shock: 2012 Jun;

Banfield J, Gomez M, Kiss A, Redelmeier DA, Brenneman FD. Effectiveness of the P.A.R.T.Y. (Prevent Alcohol and Risk-Related Trauma in Youth) Program in Preventing Traumatic Injuries: A 10-Year Analysis. Journal of Trauma: 2011; 70 - 73.

Beckett A, Engels P, Paton-Gay John, Tien H, Rizoli S. Tension pneumomediastinum. Journal of Trauma-Injury Infection & Critical Care: 2011 Oct; 71(4): 1089.

Berry S, Law CHL. Standards of care for curative surgery and management of metastatic colorectal cancer. Oncology Exchange: 2011; 10:15-20.

Bischof D, Maier BA, Smith AJ, Fitch M, Wright FC. Evaluation of a patient held record for post-operative surveillance of patients with colorectal cancer: Enhancing individual patient understanding and engagement in clinical care. International Journal of Person Centered Medicine: 2011 Jun; 1(2): 410-418.

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Brackstone M, Robidoux A, Chia S, Mackey J, Dent R, Boileau JF, Clemons M. Canadian Initiatives for Locally Advanced Breast Cancer Research and Treatment: Inaugural Meeting of the Canadian Consortium for LABC (CoLAB). Current Oncology: 2011; 18(3): 139-144.



- Brar S, Wright FC, Okrainec A, Smith AJ. A structured strategy to combine education for advanced MIS training in surgical oncology training programs. Surgical Oncology: 2011 Sep; 20(3):
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Tien HCN, Jung V, Pinto R, Mainprize T, Scales D, Rizoli SB. Reducing time-to-treatment decreases mortality of trauma patients with acute subdural hematoma. Annals of Surgery: 2011; 253(6): 1178-1183.

Tremblay LN, Scales D. Ultrasound-guided tracheostomy - not for the many, but perhaps the few '85 or the one. Critical Care: 2011; 15: 147.

Tremblay LN. Radiation from diagnostic imaging in pediatric trauma - Friend or foe? Journal of Trauma: 70: 730-1, 2011.

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Warner E, Causer PA, Wong JW, Wright FC, Jong RA, Kill KA, Messner SJ, Yaffe MJ, Narod SA, Plewes DB. Improvement in DCIS Detection Rates by MRI over Time in a High Risk Breast Screening Study. The Breast Journal: 2011; 17(1): 9-17.

Warner E, Hill L, Causer P, Plewes D, Jong R, Yaffe M, Foulkes W, Ghadirian P, Lynch H, Couch F, Wong J, Wright FC, Sun P, Narod S. A Prospective Study of Breast Cancer Incidence in Women with a BRCA1 or BRCA2 Mutation under Surveillance with and without Magnetic Resonance Imaging. Journal of Clinical Oncology: 2011; 29(13): 1664-1669.

Wells BJ, Najjar H, Wright FC, Holloway CMB, Fraser N, McCready D, Quan ML. Measuring the quality of sentinel lymph node biopsy in breast cancer using newly developed quality indicators: A feasibility study. Annals of Surgical Oncology: 2011; 18(1): 78-85.

Wright FC, Fitch M, Coates AJ, Simunovic M. A qualitative assessment of a provincial knowledge translation strategy for pancreatic cancer surgery. Annals of Surgical Oncology: 2011; 18(3): 629-635.

### **INVITED VISITS**

Boileau J-F: Canadian Society of Surgical Oncology, London, Ontario, 15 September 2011. Chair: Assessing and managing the patient at high-risk for breast cancer.

Boileau J-F: Toronto Cancer 2011 Conference, Toronto, Ontario, 25 October 2011. Invited Speaker: The role of the surgeon in the neoadjuvant setting.

Brenneman F: LifeCell Corporation - Mt. Sinai Hospital surgery fellows seminar, Toronto, Ontario, Canada, 30 August 2011. Invited Speaker: AWR techniques for complex ventral hernias.

Brenneman F: St. John's general surgeon seminar, St. John's, Newfoundland and Labrador, Canada, 6 September 2011. Invited Speaker: Complex Ventral Hernias - Abdominal Wall Reconstruction.



Brenneman F: CAGS - CSF annual meeting, London, Ontario, Canada, 16-17 September 2011. (1) Invited Speaker: One Stage Abdominal Wall Reconstruction for Complex Ventral Hernias. (2) Symposium Moderator: Acute Care Surgery Symposium. (3) Invited Speaker: EBRS session -"Wound Closure".

Brenneman F: LifeCell Corporation, Phoenix, Arizona, United States, 15 October 2011. Invited Speaker: Abdominal Wall Reconstruction Symposium & Bioskills Lab.

Brenneman F: Toronto Cancer 2011 Conference, Toronto, Ontario, Canada, 24 October 2011. Invited Speaker: Abdominal Wall Reconstruction for Complex Hernias Following Cancer Surgery.

Coburn N: Canadian Surgical Forum, London, Canada, 16 September 2011. Invited Speaker: Open Gastrectomy for Early Gastric Cancer.

Coburn N: Juravinski Cancer Centre, Hamilton, Canada, 21 October 2011. Invited Speaker: Surgical Considerations for Gastric Cancer.

Coburn N: Toronto Cancer, Toronto, 24-25 October 2011. (1) Chair: Multidisciplinary Management of Esophageal and Gastric Cancer. (2) Invited Speaker: Guidelines for the Management of Gastric Cancer. (3) Invited Speaker: Resection of Extrahepatic Liver Metastases.

Coburn N: CHE Seminar, Kingston, Ontario, Canada, 7 March 2012. Invited Lecturer: Improving gastric cancer survival: Development and measurement of quality indicators using the RAND/ UCLA appropriateness method and population-based data analysis. CHE Seminar.

Coburn N: Canadian Society of Surgical Oncology, Eighteenth Annual Scientific Meeting, Toronto, Ontario, Canada, 27 April 2012. Presenter: (1) What provider volume is appropriate for gastic cancer resection? Results of a RAND/UCLA expert panel. (2) Resection of multi-site metastases from colorectal cancer; feasibility and interim results of a multi-centre prospective phase II study.

Coburn N: Stronach Regional Cancer Centre, Newmarket, Ontario, Canada, 16 May 2012. Invited Lecturer: Treatment of Colorectal Liver Metastases.

Karanicolas P: Principles and Practice of Clinical Research, Mississauga, Ontario, 2011. Presenter: (1) What is a reliability study? (2) Statistics for Surgeons.

Karanicolas P: Toronto Cancer Conference, Toronto, Ontario, 25 October 2011. Panelist: (1) Management of Pancreatic Cancer. (2) Multidisciplinary Management of Hepatic Metastases.

Law C: Baxter, Mississauga, Ontario, 13 September 2011. General Surgery Procedures and Tisseel and Floseal.

Law C: Amgen Roundtable Dinner Meeting, Sweden, 25 September 2011. Facilitator.

Law C: ENETs 2012 Conference, 9 March 2012. Chair: Novartis Canada NET Consult Meeting.

Rizoli S: Beth Israel Deaconess Medical Center - Harvard Medical School, Boston, Massachusetts, United States, 9 February 2012. Visiting Professor: What's New in the Management of the Massive Bleeding Patients.

Rizoli, S: XIV Pre-Congress of the Brazilian Trauma Leagues, Campinas, Sao Paulo, Brazil, 18 April 2012. Visiting Professor: Management of the hypovolemic shock: permissive hypotension, transfusion 3:1 or 1:1:1?

Rizoli S: Department of Surgery of the University of Ottawa, Ottawa, Ontario, Canada, 25 April 2012. Visiting Professor: How to treat a bleeding patient in the 21st century. Grand Surgical Rounds.

Rizoli S: University of Medicine & Dentistry of New Jersey/ Robert Wood Johnson Medical School, New Brunswick, New Jersey, United States, 15 May 2012. Invited Speaker: Massive transfusion protocols in trauma. New Jersey Association of Blood Bank Professionals Annual Spring Seminar and Meeting.

Smith A: Cancer Care Ontario - Hamilton, Hamilton, Ontario, 21 September 2011. Colorectal Cancer Disease Pathway Management.

Tremblay L: Canadian Association of General Surgeons (CAGS), London, Ontario, 19 September 2011. Speaker: Surgical safety checklists improve outcomes and should be mandatory.

Wright F: Eastern Canada Colorectal Cancer Consensus Conference 2011, Halifax, Nova Scotia, October 2011. Speaker: Standards of Care with Multidisciplinary Cancer Conferences.

Wright F: Barrie, Canada, November 2011. Invited Speaker: Surgical Issues in Melanoma.

Wright F: Kingston Regional Cancer Conference, Ontario, Canada, 15 February 2012. Invited Speaker: Multidisciplinary Cancer Conferences in LHIN 10.

Wright F: Bahraini Cancer Society, Bahrain, April 2012. Invited Speaker: Recent advances in prevention, early detection and management of breast cancer. Declined Talk.



### RESEARCH AND INVESTIGATIONS

A SMART Adverse Events Tracking System for Physicians. Coburn N, Smith AJ, Taggar R, Etchells E, Seevaratnam R, Cardoso R: Provincial Academic Medicine Steering Committee. (\$99,760 2010 -

Age of blood evaluation (ABLE) trial in the resuscitation of critically ill patients. Lacroix J, Callum J, Fowler R, Rizoli S: Canadian Institutes of Health Research (CIHR). (\$4,050,189 2009 - present).

Evaluation of a new method for 3-D Histopathology. Yaffe M, Clarke G, Zubovits Z, Holloway C: Canadian Breast Cancer Research Alliance. (\$302,503 2009 - 2012).

Expanding the scope of Critical Care Rapid Response Teams: a cost-effective approach to identify preventable adverse events that cause harm. Adhikari N, Shojania K, Chapman M, Amaral A, Smith K, Fowler R, Cuthbertson B, McDonald A, Pinto R, Coburn N: Ministry of Health of Ontario, AHSC ARP Innovation Fund. (\$68,300 2010 - 2012).

Formula-driven versus laboratory-guided transfusion practices in bleeding trauma patients: a feasibility randomized controlled study. TRFL study. Rizoli S: Military Health Services, Surgeon General Canadian Forces. (\$350,000 2009 - present).

Identifying survivorship issues using a simple symptom score in patients with colorectal cancer. Karanicolas P: Sanofi-Aventis. (\$25,000 2011 - 2012).

Implementation & Assessment of a Novel Multidisciplinary e-Discharge Summary to Improve Efficiency, Satisfaction, and Safety of Transfer of Care for Complex Patients. Tremblay L, Etchells E, Engels P, Chan K, Farquharson L: AHSC, AFP Innovation Fund 2010-2011. (\$71,342 2011 - 2013).

Improving gastric cancer survival: Development and measurement of quality indicators using the RAND/UCLA appropriateness method and population-based data analysis. Coburn N, Law CHL, Helyer LK, Swallow CJ, McLeod R, Paszat L, Singh S, Rabeneck L, Tinmounth J: National Cancer Institute of Canada (NCIC). (\$552,466 2008 - 2012).

Lumpectomy vs. mastectomy or contralateral prophylactic mastectomy: an exploratory study to understand why women with early breast cancer are now choosing more extensive surgery? Wright F, Covelli A, Baxter N, Fitch F: Canadian Breast Cancer Foundation (CBCF). (\$71,500.00 2010 - 2013).

Management of occult pneumothoraces in mechanically ventilated patients - pilot study. Rizoli S: Physicians Services Incorporated Foundation (The) (PSI). (\$20,000 2008 -present).

Oncoplastics in Breast Surgery: The Impact of a Specialized Clinic on Access to and Patient Satisfaction with Breast Reconstruction. Holloway C, Simpson J, Snell L: Canadian Breast Cancer Foundation (CBCF). (\$72,000 2011 - 2012).

Population based analysis of neuroendocrine tumours: Epidemiology, Processes of Care and Outcomes in Ontario. Singh S, Law CHL: University of Toronto, The Dean's Fund. (\$100,000 2009 -2014).

Predictors of Local Recurrence in Ductal Carcinoma in Situ: A Population-based Outcomes Analysis. Rakovitch E, Paszat L, Hanna W, Pignol J-P, Kahn H, Wong J, Done S, Goodwin PC, Tuck A, Elavathil L, Gravel D, Sengupta S, Escot N, Bonin M, Quan ML, Zhang L, Holloway C: Canadian Breast Cancer Research Alliance. (\$1,274,373 2007 - 2012).

Protocol BR1-128: Characterization of Focal Liver Lesions with SonoVue-Enhanced Ultrasound Imaging; A Phase III, Intrapatient Comparative Study Versus Unenhanced Ultrasound Imaging Using Histology or Combined Imaging/Clinical Data as Truth Standard. Law C, Milot L: Bracco Diagnostics. (\$122,876 2011 - 2012).

Quality of Life Following Resection of Colorectal Cancer. Karanicolas P: Colon Cancer Canada, Operating Grant. (\$50,000 2011 - 2012).

Quality of Life Following Resection of Colorectal Cancer. Karanicolas P, Coburn N, Law C: Colon Cancer Canada. (\$60,000 2012).

Registration of Supine Breast MRI Using Positional Surface Markers. Siegler P, Martel A, Holloway C: FED DEV Ontario Applied Research and Commercialization Initiative. (\$75,000 2011 - 2012).

Screen-Net Ontario: The Ontario Cancer Screening Research Network. Paszat L, Rakovitch E, Seth A, Hanna W, Murphy J, Kupets R, Baxter N, Tinmouth J, Hsieh E, Fleshner N, Chiarelli A, Aubera Z, vanBallegooijen M, Lansdorp-Vogelaar I, Andrulis I, Knight J, Holloway C: Cancer Care Ontario. (\$1,180,000 2011 - 2016).

Sentinel node biopsy following neoadjuvant chemotherapy in biopsy proven node positive breast cancer: The SN FNAC study. Boileau J-F: Quebec Breast Cancer Foundation (QBCF), Peer reviewed by the Cancer Research Society (CRS), Quebec Breast Cancer Foundation (QBCF). (\$26,000 2010 present).



Sentinel Node biopsy Following NeoAdjuvant Chemotherapy in biopsy proven node positive breast cancer: The SN FNAC Trial. Boileau JF, Basik M, Gaboury L, Martin G, Meterissian S, Patocskai E, Poirier B, Sideris L, Robidoux A: Quebec Breast Cancer Foundation (QBCF), Peer reviewed by the Cancer Research Society (CRS), Research Grants Program (QBCF). (\$424,500 2009 - 2012).

The Ability of Routine Renal Imaging to Prevent the Morbidity and Mortality of Urinary Stone Disease in Spinal Cord Injury Patient. Welk B, Law CHL, Herschorn S: Physicians Services Incorporated Foundation (The) (PSI). (\$14,000 2011 - 2012).

The use of extended perioperative low molecular weight heparin to improve cancer specific survival following surgical resection of colon cancer: A randomized controlled trial. Auer R, Carrier M, Smith AJ, Allan D, Jonker D, Mamazza J, Tagalakis V, Wells P: Canadian Institutes of Health Research (CIHR). (\$800,000 2010 - 2014).

Training Program in Transdisciplinary Cancer Research. Johnson A, Mahar A, Coburn NG: Queens University Terry Fox Foundation Training Program in Transdisciplinary Cancer Research in Partnership with CIHR. (\$11,500 2011).

### **HONOURS RECEIVED**

Coburn N: Career Scientist Award, Ministry of Health and Long-Term Care.

Hanna S: Rose Award, Sunnybrook Health Sciences Centre. The Sunnybrook Rose Award recognizes the exemplary efforts of volunteers for outstanding service to Sunnybrook in a fundraising capacity and hospital staff and physicians for outstanding work to support the philanthropic objectives of Sunnybrook. 2011.

Rizoli S: AAST Research Fellowship, American Association for the Surgery of Trauma.

Rizoli S: New Investigator Award, Canadian Institutes of Health Research.

Tremblay L: Sunnybrook Moment of Service Excellence Award, Sunnybrook Health Sciences Centre. December 2011.



## **Division of Neurosurgery**

Dr. L. da Costa **Assistant Professor Assistant Professor** Dr. M. Fazl Dr. D. Houlden **Assistant Professor** Dr. T. Mainprize **Assistant Professor** Dr. N. Phan Assistant Professor Dr. F. Pirouzmand **Assistant Professor** Dr. M. Schwartz Professor (Division Head)

### **PUBLICATIONS**

Cadotte D, Pirouzmand F. The epidemiological trends of head injury in the largest Canadian adult trauma center from 1986 to 2007. Journal of Neurosurgery: 2011; 114: 1502-1509.

Etame AB, Diaz RJ, O'Reilly MA, Smith CA, Mainprize TG, Hynynen K, Rutka JT. Enhanced delivery of gold nanoparticles with therapeutiv potential into the brain using MRI-Guided focused ultrasound. Nanomedicine: 2012 Feb; 17:2.

Etame AB, Diaz RJ, Smith CA, Mainprize TG, Hynynen K, Rutka JT. Focused ultrasound disruption of the blood-brain barrier: a new frontier for therapeutic delivery in molecular neurooncology. Neurosurg Focus: 2012 Jan; 32(1): E3.

Kalia LV, Mozessohn L, Aviv RI, da Costa L, Lang AE, Shadowitz S, Masellis M. Hemichorea-hemiballism associated with hyperglycemia and a developmental venous anomaly (DVA). Neurology: 2012; 78: 838-839.

Mainprize TG, Bernstein, M. Awake Craniotomy for Brain Metastasis. Journal of Pain Management: 2011; 4:159-168.

Pirouzmand F. Letter to the Editor response. J Neurosurg: Spine: 2011 Nov; 15:576-577.

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Thines L, Dehdashti AR, da Costa L, Tymianski M, ter Brugge KG, Willinsky RA, Schwartz M, Wallace MC. Challenges in the management of ruptured and unruptured brainstem arteriovenous malformations: outcome after conservative, single modality or multi modality treatments. Neurosurgery: 2012 Jan; 70(1): 155-161.

Tien HC, Jung V, Pinto R, Mainprize T, Scales DC, Rizoli SB. Reducing Time-to-Treatment Decreases Mortality of Trauma Patients with Acute Subdural Hematoma. Annals of Surgery: 2011; 253: 1178-1183.

### **INVITED LECTURES**

da Costa L: 61th Congress of Neurological Surgeons Annual Meeting, Washington, District of Columbia, United States, 1 October 2011. Presenter: Use of Precise CO2 Manipulation and Transcranial Doppler in the Assessment of Cerebral Autoregulation after Aneurysmal Subarachnoid Hemorrhage.

da Costa L: European Association of Neurosurgical Societies, 14th European Congress of Neurosurgery, Rome, Italy, 9 October 2011. Presenter: Use of precise CO2 manipulation and transcranial Doppler in the assessment of cerebral autoregulation after aneurysmal subarachnoid hemorrhage.

da Costa L: Hospital Mater Dei - 1st International Symposium on SAH and vasospasm, Belo Horizonte, Minas Gerais, Brazil, 10-11 March 2012. Invited Speaker: 1/ Clip x coils: a critical appraisal of current evidence. 2/ Pb02 monitoring in vasospasm diagnosis and treatment.

da Costa L: OMNI channel 4, Toronto, Ontario, Canada, 8 January 2012. Invited Speaker: Stroke. 30 minute TV interview on stroke causes, prevention and treatment.

Houlden D: 2011 Congress of Neurological Surgeons Annual Meeting, Washington, District of Columbia, United States, 3 October 2011. Speaker: Use of Precise CO2 Manipulation and Transcranial Doppler in the Assessment of Cerebral Autoregulation after Aneurysmal Subarachnoid Hemorrhage.

Houlden D: 60th Annual Conference of Neurological Society of India, Bangalore, India, 15 December 2011. Speaker: The Utility of Electrophysiology during Nerve Surgery.

Houlden D: Canadian Association of Neurophysiological Monitoring, Toronto, Ontario, 30 September 2011. Speaker: Intraoperative monitoring and mapping of the spinal cord during neurosurgical procedures.

Houlden D: McMaster University Anaesthesia Rounds, Hamilton, Ontario, 2 November 2011. Speaker: Working Together.

Mainprize T: CCNS, Vancouver, British Columbia, 2011. Presenter: Blood-brain barrier opening with MRI-guided transcranial focused ultrasound enhances gold nanoparticle uptake into rat brain.

Mainprize T: Focused Ultrasound Surgery Foundation, Charlottesville, Virginia, 23 October 2011. Invited Speaker: 1/ MRI guided Focused Ultrasound to disrupt the Blood Brain Barrier in the treatment of malignant glioma. 2/ The Role Ablative MRI guided Focused Ultrasound in Malignant Gliomas.

Mainprize T: SNO (Society for Neuro-Oncology), 2011. Speaker: Targeted delivery of gold nanoparticles to the invasive front of malignant glioma using transcranial magnetic-resonance image guided focused ultrasound.

### **RESEARCH AND INVESTIGATIONS**

A Study to Evaluate the Safety and Feasibility of Transcranial MRI-Guided Focused Ultrasound Surgery in the Treatment of Brain Tumors. Mainprize T, Hynynen K, Sahgal A, Perry J, Symons S: Focused Ultrasound Surgery Foundation. (\$170,000 2011 - 2013).

Catecholamines as outcome markers in traumatic brain injury study COMA in TBI study. Rizzoli S. Capone A, Rubenfeld G, da Costa L, Topolovec-Vranic J, Chapman M, Shawn R: Physicians Services Incorporated Foundation (\$162,500 2011 - 2013).

Molecular Targetting of the RHO-GTPase Pathway in Human Astrocytomas. Rutka J, Hynynen K, Mainprize T: Canadian Institutes of Health Research (CIHR). (\$750,000 2010 - 2015).

Optical Coherence Tomography for Intraoperative Imaging During Skull Base Neurosurgical Procedures. Yang V, Cusimano M, da Costa L, Standish B: Canadian Institutes of Health Research (CIHR). (\$134,200 2011 - 2014).

Teaching sessions - Transcavernous approaches to the basilar artery. da Costa L: EV3. (\$3,000 2012).



### **HONOURS RECEIVED**

Mainprize T: Alan Hudson Teaching Award, Neurosurgery, Dept of Surgery, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada. Neurosurgery Faculty showing excellence in Undergraduate and Post-graduate Teaching. (Multilevel Education). July 2011 - July 2012.

## Division of Orthopaedics

Dr. M. Akens Lecturer Dr. T. Axelrod Professor

Associate Professor Dr. H. Cameron **Assistant Professor** Dr. J. Cameron

Dr. G. Fernie Professor

Dr. J. Finkelstein Associate Professor Dr. M. Ford **Assistant Professor Assistant Professor** Dr. J. Gollish

Professor Dr. H. Hall

Dr. R. Holtby **Assistant Professor** 

Dr. R. Jenkinson Lecturer

Dr. H. Kreder Professor (Division Head)

Dr. B. Maki Professor

Dr. B.W. Malcom **Assistant Professor** Dr. P. Marks Associate Professor Dr. J. Murnaghan Associate Professor Dr. D. Nam **Assistant Professor** Dr. M. Nousiainen **Assistant Professor** Dr. R. Richards Professor

Dr. D. Stephen Associate Professor Dr. V. Wadey **Assistant Professor** Dr. C. Whyne Associate Professor Dr. C. Wright Assistant Professor Dr. A. Yee Associate Professor

### **PUBLICATIONS**

Ahn H, Kreder H, Mahomed N, Beaton D, Wright JG. Empirically derived maximal acceptable wait time for surgery to treat. CMAJ: 2011 Jun; 14:183 (9): E565-570

Ahn H, Singh J, Nathens A, Macdonald R, Travers A, Tallon JM, Fehlings M, Yee AJ. Pre-Hospital Care Management of a Potential Spinal Cord Injuried Patient: A Systematic Review of the Literature and Evidence Based Guidelines. J Neurotrauma: 2011; 28(8): 1341-1361.

Akens MK, Burch S, Yee AJM. Evaluation of photodynamic therapy as treatment for spinal metastases. Journal of Pain Management: 2011; 4: 83-90.

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### **INVITED LECTURES**

Akens M: ORS, San Francisco, California, United States, 2012. Presenter: The Effect of Photodynamic Therapy (PDT) on Long Bone Fracture Healing.

Axelrod T: Canadian Orthopaedic Association Annual Meeting, St. John's, 7 July 2011. 1/ Preparation of a Quality Medical Legal Report; IC#3 Medical Legal Issues. 2/ Update on Distal Radius Fractures: IC#6 Common Top Fractures Update.

Axelrod T: American Society for Surgery of the Hand, Annual Meeting, Las Vegas, Nevada, United States, 9 September 2011. Chair: The SLAC Wrist Dilemma: Chairman opening remarks, definitions and role of the Proximal Row Carpectomy. Instruction Course Lecture.

Axelrod T: AO Trauma Course-Management of Fractures of the Hand and Wrist, Davos, Switzerland, 4-8 December 2011. Invited Lecturer: 1/ AO Trauma Practical Exercise: Fixation of a Bennett Fracture with lag screws. 2/ Review of Day 1 Presentations. 3/ Treating Other Carpal Fractures. 4/ Management Principles of Articular Fractures of the Distal Radius. 5/ Lab Module: Dorsal double Plating Distal Radius Fractures. 6/ Mal-union of the Distal Radius-Articular Malunion. 7/ Arthrodesis of the Wrist: Indications, Technique and Outcome. 8/ Practical Exercise (Lab Simulation): Radiocarpal Arthrodesis.

Axelrod T: AO Trauma Course-Masters Course: Complications and Complex Fractures. Interactive, Davos, Switzerland, 12-13 December 2011. Invited Lecturer: 1/ complex non-unions and bone defects. 2/ Complex Mal-Union Upper Extremity.

Axelrod T: AO North America Trauma Cadaver Course for Fellows, Las Vegas, Nevada, United States, 15 January 2012. Invited Lecturer: Cadaveric Dissection: Approaches to the Elbow and Forearm.

Axelrod T: Synthes, Beaver Creek, Colorado, United States, 21-23 January 2012. 1/ Chair: Programme Chair Synthes Think Tank: Upper Extremity Trauma and Reconstruction. 2/. Invited Lecturer: Lecture: Complex Scaphoid Fracture and Non-Union Synthes Think Tank: Upper Extremity Trauma and Reconstruction. 3/ Invited Lecturer: Lecture: Complex Distal Radius Fracture and Non-Union Synthes Think Tank: Upper Extremity Trauma and Reconstruction.

Axelrod T: AO North America, Hand and Wrist Fracture Management Course. Dallas, Texas, United States, 15 March 2012. 1/ Distinguished Speaker: Tips and Tricks in Hand Surgery. 2/ Invited Speaker: The History of the AO Foundation. 3/ Invited Speaker: The Influence of Metal Surfaces and Metallurgy.

Axelrod T: AO North America Hand and Wrist Fracture Management Workshop, Toronto, Ontario, Canada, 5 May 2012. Chair: 1/ Introduction and Summation. 2/ Case Discussions: Fractures of the Distal Radius and Scaphoid.

Cameron H: Current Concepts, Orlando, Florida, 8 December 2011. Invited Speaker: 1/ Burst Femoral Fractures - during revision. 2/ Cementless Knee Fixation.

Cameron J: COA, St. John's, 7 July 2011. Speaker: Surgical Management of Congenital Dislocation of the Patella.

Cameron J: Sicot XXV Triennial World Congress, Prague, Czech Republic, 6 September 2011. Speaker: Congenital Dislocation of the Patella Treated by Combined Rotational High Tibial Osteotomy and Total Knee Arthroplasty.

Cameron J: Rocky Mountain Traumatological Society, Colorado, USA, Jan 12 - 14, 2012. Speaker: Failed Quadriceps Tendon Repair 2 Degrees to Patella Baja.

Cameron J: Birmingham Patello-Femoral Instructional Course, Birmingham, England, Jun 22 -23, 2012. 1) Indications + Results of Tibial Tubercle Osteotomy (2) Rotational Osteotomy for Patella Instability.

Finkelstein J: International Society for Quality of Life Research, Denver, Colorado, 25 October 2011. Presenter: 1/Response Shift in People Awaiting Spine Surgery: Investigating Quality of Life using Mixed Methods. 2/ From the Drawing Board to the Clinic: Clinical Applications of Response Shift.



Finkelstein J: Workplace Safety and Insurance Appeals Tribunal (WSIB), Toronto, Ontario, Canada, 13 February 2012. Invited Speaker: 1) Neck and arm pain and related symptoms, 2) Cervical spine disorders.

Holtby R: Canadian Orthopaedic Association (COA), St. John's, 9 July 2011. Presenter: Clinical Outcome of Arthroscopic Debridemnet for Treatment of Osteoarthritis of Glenohumeral Joint.

Jenkinson R: Canadian Orthopaedic Association, St. John's, 7 July 2011. Presenter: 1/ Delayed Debridement Increases Risk of Deep Infections Among High Grade Open Fractures: An analysis of 459 Open Fractures. 2/ Why am I Not Getting My Hip Fixed Today: Institutional Factors Contributing to Delay of Hip Fracture Surgery.

Jenkinson R: Ontario Orthopaedic Association, Toronto, Ontario, Canada, 5 November 2011. 1/ Faculty: "Current Concepts in Fracture Care". 34th Annual General Meeting, Ontario Orthopaedic Association. 2/ Invited Speaker: An update on acetabular fractures for the non-subspecialized orthopaedic surgeon.

Kreder H: Advanced Concepts in the Principles and Practice of Clinical Research, Mississauga, Ontario, October 2011. Presenter: 1/ How can we randomize? Envelopes, Telephone, and Internet. 2/ What are the Types of Non-Randomized Studies?

Kreder H: Annual Ontario Orthopaedic Association, Toronto, Ontario, Canada, 4-5 November 2011. Invited Speaker: 1/ Proximal femoral fractures, new implants and old principles. 2/ Pelvic Fractures: How to Stay out of Trouble.

Kreder H: Canadian Orthopaedic Resident Review Course, Canada, 24 November 2011. 1/ Seminar Leader: Fracture management of the upper and lower extremities: A case based approach. 2/ Invited Speaker: Pelvic ring injuries: Top ten things all orthopaedic surgeons must know.

Kreder H: AO International Trauma Master's Course, Davos, Switzerland, 6 December 2011. 1/ Moderator: Periprosthetic fractures about the knee. 2/ Invited Speaker: The infected periprosthetic hip fracture; how to treat. 3/ Invited Speaker: Discussion leader breakout session; Challenging periprosthetic fracture cases. 4/ Invited Speaker: Fractures of the patella with a patellar replacement in situ. 5/ Invited Speaker: Fractures around the total shoulder. 6/ Invited Speaker: Fractures of the patella with a patellar replacement in situ.

Kreder H: AO North America, Las Vegas, Nevada, United States, January 2012. 1/ Table Instructor: Surgical Approaches. Fellows Symposium with Human Anatomic Specimen.

Kreder H: American Academy of Orthopaedic Surgeons (AAOS), San Francisco, California, United States, February 2012. Invited Speaker: 1/ Periprosthetic Fractures: When to Replace. 2/ Periprosthetic Fractures: Case Presentations and Management.

Kreder H: QEII HSC, Dalhousie University (Chad Coles, MD), Halifax, Nova Scotia, Canada, April 2012. Visiting Professor: Proximal Femur Fractures. Presented at Divisional Rounds at QEII HSC.

Kreder H: Annual Schatzker Day, Kelowna and the Surrounding BC Interior, British Columbia, Canada, 25-26 May 2012. Visiting Professor: 1/ Multi-Trauma and the Essentials of Pelvic injury management for the Community Orthopaedic Surgeon. 2/ Proximal Femur Fractures; An Update and Strategies for Success.

Kreder H: AO North America, Pelvic and Acetabular Fracture Management Course: A Hands-On Course Including Human Anatomic Specimen. Toronto, Ontario, Canada, May 2012. Co-Chair: 1/ Radiology Interpretation of T-Shaped Fractures. 2/ The Acute Injury - Pelvic Trauma Management.

Murnaghan J: Australian and New Zealand Orthopaedic Association, Rotorua, New Zealand, 11 October 2011. Presenter: Prospective Observational Study of an Oral Factor Xa Inhibitor (rivaroxaban) on Prevention of Venous Thromboembolism in Elective Hip and Knee Arthroplasty.

Murnaghan J: American Academy of Orthopaedic Surgeons, San Francisco, California, United States, 7 February 2012. Presenter: Thromboembolic and Bleeding Events Following Elective Hip and Knee Arthroplasty Using Oral Factor Xa Inhibitor.

Murnaghan J: OARSI 2012 World Congress on Osteoarthritis, Barcelona, Spain, 26 April 2012. Presenter: Compliance with Thrombophrophylaxis using an Oral Factor XA Inhibitor Rivaroxaban After Total Hip and Knee Arthroplasty. Is Oral Therapy Better? An Examination of the Non-Adherence Rate of Rivaroxaban. Disposition of submission.

Murnaghan J: Canadian Association Emergency Physicians, Niagara Falls, Ontario, Canada, 3 June 2012. Presenter: Thromboembolic and Bleeding Events following Total Hip and Knee Arthroplasty using factor Xa inhibitor.

Nam D: 2012 Hand and Upper Extremity Think-Tank, Avon, Colorado, United States, 22 January 2012. Presenter: Scaphoid nonunion and radial carpal salvage. Clinical questions in search of solutions, Synthes.



Nam D: Orthopaedic Research Society Annual Meeting, San Francisco, California, United States, February 2012. Presenter: T-Lymphocytes enable osteoblast maturation during the early phase of fracture repair.

Nam D: AO North America, Hand and Wrist Fracture Management Workshop, Toronto, Ontario, Canada, 5 May 2012. Faculty: 1/ Can all distal radius fractures be managed with volar locking plates? What about external fixation? 2/ Percutaneous vs. open fixation of scaphoid fractures; dorsal or palmer?

Nousiainen M: AO North America, Basic Principles and Techniques of Operative Fracture Management Course, Chicago, Illinois, United States, 30 July 2011. Presenter: 1/ Open Fractures. 2/ The Spectrum of Stability.

Nousiainen M: Carolinas Medical Centre, Charlotte, North Carolina, United States, 8 August 2011. Invited Lecturer: Division of Orthopaedic Surgery Grand Rounds, A Competency Based Curriculum in Orthopaedic Surgery: From Idea to Implementation.

Nousiainen M: Dewar Orthopaedic Society, London, Ontario, Canada, 24 September 2011. Invited Lecturer: An update on the University of Toronto Division of Orthopaedic Surgery's Competency Based Curriculum.

Nousiainen M: Society of Physiotherapists with Foreign Credentials, Toronto, Ontario, 21 October 2011. Presenter: Assessing Primary Total Hip and Total Knee Arthroplasty Patients.

Nousiainen M: CORR Trauma Course, Mississauga, Ontario, Canada, 26 November 2011. Invited Lecturer: Proximal Tibia Fractures: the Top 10 Things You Need to Know.

Nousiainen M: Canadian Spine Society, Sun Peaks, British Columbia, Canada, 2 March 2012. Invited Lecturer: Am I A Competent Surgeon? Competency-Based Medical Education and an Update On UofT's CBC Program Symposium.

Nousiainen M: AO North America, Pelvic and Acetabular Fracture Management Course, Toronto, Ontario, Canada, 10-11 May 2012. Invited Lecturer: 1/ Practical Exercise 1: A. External Fixation -Pelvis; B. Binder Demonstration. 2/ Radiology of Posterior Wall, Posterior Column, and Posterior Wall and Column Fractures.

Nousiainen M: Canadian Orthopaedics Associates Meeting, Ottawa, Ontario, Canada, 2012. Invited Lecturer: Examining Retention Rates For Skills Taught Through An Intensive Laboratory-Based Surgical Skills Course.

Richards R: AO Trauma North America, Hand and Wrist Fracture Management Workshop. St. Louis, Missouri, United States, 19 May 2012. Speaker: Indication, Techniques and Principles of Joint Fusion in the Hand & Proximal Phalanx Unicondylar Fractures.

Stephen D: Chicago Trauma Symposium, Chicago, Illinois, United States, 25 August 2011. Invited Speaker: 1/ Prevention and Treatment of Complications in the Pelvis and Acetabulum. 2/ ORIF for Displaced Femoral Neck Fractures - Surgical Solutions. 3/ Intramedullary Nailing for the Femoral Diaphysis.

Stephen D: Synthes, Tuscon, Arizona, United States, 12 November 2011. Faculty & Invited Speaker: Breakout Sessions 1) Upper Extremity Firesides, 2) Lower Extremity Firesides.

Stephen D: AAOS - American Academy of Orthopaedic Surgeons, San Francisco, California, United States, 8-9 February 2012. Invited Speaker: 1/ Treatment of Periprosthetic Fractures. 2/ Talus and Calcaneus Fractures: Current Treatment.

Stephen D: AO & VuMedi, Toronto, Ontario, Canada, 3 April 2012. Invited Speaker: Syndesmosis Injuries. Presenter. Webinar.

Stephen D: AO North America, Solutions Fracture Fixation Course, San Francisco, California, United States, April 2012. Invited Speaker: 1/ Ankle Fractures - Salvage of Common Treatment Errors. 2/ Ankle Arthrodesis for Salvage of Trauma Sequelae. 3/ Solutions Fracture Fixation Course.

Stephen D: AO North America, Pelvic and Acetabular Fracture Management Course, Toronto, Ontario, Canada, 10 May 2012. Course Co-Chair:: A Hands On Course including Human Anatomic Specimen. 2/ Internal fixation of the pelvic ring - Sacroiliac dislocation and fracture/dislocation.

Wadey V: COA Annual Meeting, St. John's, Newfoundland and Labrador, 7-8 July 2011. 1/ Facilitator: ICL - What's New in Continuing Education in Orthopaedic Surgery? 2/ Presenter: Content Review all health care providers: On-line case simulation: The ability to screen, identify and initially manage inflammatory arthritis. 3/ Presenter: Development of a workshop on "Optimizing learning in orthopaedic surgery".

Wadey V: ICRE, Quebec City, Quebec, Canada, 24 September 2011. Presenter: On-line Case Simulation: The Ability to Screen, Identify and Initially Manage Inflammatory Arthritis: Inter-Professional Review.



Wadey V: COA, Ottawa, Ontario, Canada, 8 June 2012. Presenter: On-line vs paper format learning: identifying inflammatory arthritis early: Randomized control trial.

Whyne C: University of Leeds, Leeds, United Kingdom, September 2011. Invited Guest: Oncological Engineering Workshop.

Whyne C: US/Canadian Bone and Joint Initiative, Ontario, Canada, 13 April 2012. Speaker: Young Investigators Initiative Workshop.

Whyne C: BONUS Symposium, Ottawa, Ontario, April 2012. Presenter: Metastatic bone bioengineering and treatment.

Whyne C: Canadian Operational Research Society, Ottawa, Ontario, Canada, June 2012. Speaker: Spine session.

Yee A: Sarcoma Professional Committee, Chinese Anti-Cancer Association - First International Summit Forum of Bone and Soft Tissue Tumor, Beijing, China, 17 December 2011. Distinguished Speaker: Translational Research Opportunities in the Treatment of Vertebral Metastases.

Yee A: Canadian Spine Society - Fellowship Symposium, Sun Peaks, British Columbia, Canada, 2 March 2012. 1/ Speaker: Competency in Spinal Surgery in Canada - Perspective on cognitive and procedural competencies by our fellows as well as supervisors alike. 2/ Co-Chair: Symposia -- The Future of Spine Subspecialty Training and Accreditation.

Yee A: Ontario Neurotrauma Foundation (Inaugural OSCIRN Meeting), Niagara Falls, Ontario, Canada, 28 April 2012. Speaker: Opportunities for Interprofessional Collaboration (IPC) Interventions in Acute Spinal Care.

Yee A: Canadian Orthopaedic Association (COA) Annual Meeting, Ottawa, Ontario, Canada, 8 June 2012. Speaker: Treating Cancer Spread to the Spine: Translating Research from the Clinic to the Bench and Back.

### RESEARCH AND INVESTIGATIONS

A Phase I Trial on the use of PDT in the treatment of Breast Cancer Vertebral Metastasis. Yee A, Bisland S, Burch S, Chow E, Clemons M, Sahgal A, Whyne C; Wilson B, Akens M: Canadian Breast Cancer Foundation (CBCF), Ontario Chapter. (\$300,850 2009 - 2012)

A Randomized Prospective Trial Comparing Operative and Non Operative Treatment of Humeral Shaft Fractures. Berry G, Kreder HJ, Rouleau D, Morin S, Rahme E, Harvey E, Reindl R, Talbot M, Leighton R, Laflamme Y, Liew A, Stephen D, Schemitsch E, McKee M, Furey A, Pilkey B, Buckley R, O'Brien P, Guy P, McCormack R: AO Foundation, AO Research Fund. (\$120,000 2010 - 2012)

A retrospective study of complications following total joint arthroplasty: Relationship to rheumatoid arthritis versus osteoarthritis. Ravi B, Hawker G A, Kreder H J: Canadian Institutes of Health Research (CIHR), CIHR Doctoral Research Award. (2012)

Bone stability and tumor burden in the metastatic spine: Implications of variable disease patterns. Whyne C, Yee AJM, Finkelstein JA: Canadian Institutes of Health Research. (\$440,974 2008 - 2012)

Can Patient Decision Aids Improve Shared Decision Making and Reduce Gender Disparity in the Utilization of Total Knee Arthroplasty? A Pilot Sudy. Tugwell PSL, Hawker GA, Borkhoff C, Dervin G, Kreder H, Stacey D: Canadian Institutes of Health Research (CIHR). (\$110,416 2011 - 2013)

CIHR team for the development, testing and knowledge translation of innovative approaches to optimize gait and balance of older adults. Maki BE, Bayley M, Brooks D, Fernie GR, Flint A, Jaglal S, Liu B, McIlroy WE, Mihailidis A, Perry S, Popovic M, Pratt J: Canadian Institutes of Health Research (CIHR). (\$1,499,982 2008 - 2014)

Clinical outcomes following oral factor Xa inhibitor. Murnaghan J, Gollish J, Kreder H, Geerts B: Bayer HealthCare AG. (\$425,000 2010 - 2012)

Complications and re-operation after tibial plateau fracture fixation in a large population cohort. Wasserstein D, Kreder H: Orthopaedic Trauma Association (OTA). (\$10,000 2012 - 2012)

Developing Optimised Vertebroplasty Treatments for Vertebral Fractures in Multiple Myeloma. Hall R, Ashcroft A, Timothy I, Cook G, Kapur N, Whyne CM, Arthrocare UK Ltd: Engineering and Physical Sciences Research Council (EPSRC) (UK). (\$591,281 GBP 2010 - 2014)

Development of a Novel Method for Stabilizing Traumatic Craniofacial Injuries. Whyne C, Fialkov J, Regev E, Santerre P: Congressionally Directed Medical Research Program. (\$100,000 USD 2010 - 2012)

Efficacy of a handrail cueing system designed to prevent falls by facilitating effective grasping. Maki BE, Middleton S: Ontario Neurotrauma Foundation (ONF), Summer Internship Program. (\$7,000.00 2011).



Finite Element Modelling of The Human Craniofacial Skeleton. Fialkov J, Whyne CM: Advanced Cranio-Maxillofacial Forum Research Grant. (\$60,000 2009 - 2011)

Identifying Barriers and Facilitators to Prescribing Immediate Weight-Bearing after Hip Fracture Surgery among Canadian Orthopaedic Surgeons. A Preliminary Study to inform the development of a knowledge translation intervention. Jaglal S, Carlin L, Frank C, Jenkinson R, Kontos P, Kreder H, Sibley K: Knowledge Translation (KT) Canada, KT Canada Seed Funding. (\$30,000 2011 - 2012)

Moving from Knowledge to Action: The University of Toronto Spine Collaborative (UT-SpineLINK) Phase II Proposal in the Implementation of Knowledge Translation Strategies. Yee A, Fehlings M, Webster F, Ahn H, Ginsberg H, and UT Spine Program: MOH-LTC, OMA, Ontario Academic Health Sciences Centre Agreement, Alternate Funding Plan Phase III Innovation Funds. (\$100,000 2011 - 2013)

Multi-resolution modeling of thin bone structures in the human skeleton. Whyne C: NSERC. (\$245,000 2011 - 2015)

Novel Radio Frequency Ablation Technology for Treatment of Solid Tumours in Bone. Sherar M. Murphy K, Whyne C, Yee A, McCann C: MaRS Innovation (MI), Competitive Institutional Proof-of-Principle (CIPoPP). (\$199,900 2011 - 2013)

Patient donation to Dr. V. Wadey Foundation Funds at Sunnybrook Hospital for research. Wadey V. (\$15,000 2011)

Photodynamic therapy treatment to enhance fracture healing. Akens M, Whyne C, Nam D, Wilson BC, Yee AJM: Congressionally Directed Medical Research Program. (\$100,000 USD 2010 - 2012)

Restoration of joint function through subchondral delivery of therapeutics. Marks P, Stanish W, El-Gabalawy H, Shive MS: Natural Sciences and Engineering Research Council of Canada (NSERC). (\$752,310 2008 - 2013)

Risk Factors & Indicators that Predict the Progression of Osteoarthritis After Knee Injury. Marks PH, Hurtig M, White L, Weller I: Canadian Institutes of Health Research (CIHR). (\$300,000 2004 -2012)

Safe activities following elective total hip replacement (SafeT). Weller I, Corey PN, Gignac M A, Gollish JD, Hawker GA, Kennedy DM, Kreder HJ, MacDonald SJ: Canadian Institutes of Health Research (CIHR). (\$930,000 2007 - 2012)

Serum microRNAs as biomarkers of post-traumatic osteoarthritis. Gibson G, Marks P, Yang M, Zhang L, Les C, Divine G: National Institutes of Health. (\$998,103 USD 2011 - 2012)

The Immune Mediation of Fracture Repair. Nam D, Whyne C, Anderson M, Alman B: University of Toronto, Dean's Fund New Staff Grant. (\$10,000 2010 - 2012)

The Immune System and Fracture Repair. Nam D: Sunnybrook Health Sciences Centre Research Institute, Start-up Operating Funds. (\$100,000 2009 - 2012)

The role of the arms in reacting to sudden loss of balance: a pilot study to evaluate age-related changes. Maki BE, Prout E: Ontario Neurotrauma Foundation (ONF). (\$9,000 2012)

Therapeutics and imaging for the injured spinal cord: MRI guided focused ultrasound and viral delivery across the blood spinal cord barrier - A pilot study. Whyne C, Aubert I, Chopra R, Staniscz G, Hynynen K, Finkelstein J, Yee A: Centre for Spinal Trauma. (\$40,000 2011 - 2012)

Training Tibial Nail Distal Locking Screw Insertion Skills to Surgical Trainees: Sureshot Technology Versus Conventional Fluoroscopic Technique. Nousiainen M: Smith and Nephew Inc. (Memphis, TN, USA). (\$45,000 2012 - present)

Use of computer-based visual training to improve balance-recovery reactions in older adults: evaluation of a randomized controlled trial. Maki BE, McKay S: Ontario Neurotrauma Foundation (ONF). (\$12,000 2012)

### **HONOURS RECEIVED**

Murnaghan J: RCPSC/AMS/Donald Richards Wilson Award, Royal College of Physicians and Surgeons of Canada. In recognition of demonstrating excellence in integrating the Can MEDS roles into a Royal College Training Program. 2011.

Nam D: New Investigator Recognition Award (NIRA), Orthopaedic Reearch Society. February 2012.

Nousiainen M: Dewar Orthopaedic Society "Coq of the Talk Award". 2011.

Whyne C: Canadian Orthopaedic Research Society Founders' Medal, Canadian Orthopaedic Research Society. October 2011.

Whyne C: Division of Orthopaedics Fellowship Day, Best basic science Presentation Award, University of Toronto. June 2012.



Whyne C: The Charles H. Tator Surgeon-Scientist Mentoring Award, University of Toronto. May 2012.

Yee A: 11th Annual Charles H. Tator Surgeon-Scientist Mentoring Award, University of Toronto. Award recognizing excellence in research mentoring of surgeon-scientists in the Department of Surgery, University of Toronto. May 2012.

Yee A: 2011 J. Edouard Samson Award, Canadian Orthopaedic Foundation, Canada. The premier award for orthopaedic research in Canada.

Yee A: 2013 American British Canadian (ABC) International Travelling Fellowship, Canadian Orthopaedic Association. May 2012.

Yee A: Mentor Award, Division of Orthopaedics, University of Toronto. Selected by graduating residents in recognition of resident trainee guidance and mentoring over the years. December 2011.

## Division of Plastic and Reconstructive Surgery

Associate Professor Dr. O. Antonyshyn

Dr. P. Binhammer Assistant Professor (Division Head)

Dr. R. Cartotto Associate Professor

Dr. M. Dibildox Lecturer

Dr. J. Fialkov **Assistant Professor** Dr. M. Jeschke Associate Professor Dr. J. Lipa Associate Professor Dr. S. Shahrokhi Lecturer

Dr. L. Snell Assistant Professor

### **PUBLICATIONS**

Arno A, Smith AH, Blit PH, Al Shehab M, Gauglitz GG, Jeschke MG. Review: Stem Cell Therapy: A New Treatment for Burns? Pharmaceuticals: 2011; 4(10):1355-1380.

Berger M, Shahrokhi S, Jeschke M. Critical Care of Thermally Injured Patient. In: Handbook of Burns Volume 1: Acute burn care. (Marc G. Jeschke, Lars-Peter Kamolz, Folke Sjoberg and Steven E. Wolf: eds.), Springer, 2011.

Blit PH, Jeschke MG. Keloids: What do we know and what do we do next? Translational Research: 2012; 159:173-174.

Bogdanovic E, Jeschke MG. Insulin therapy improves protein metabolism in the critically ill. Crit Care: 2012 May; 16(3): 125.

Branski L, Dibildox M, Shahrokhi S. Treatment of Burn - Established and Novel Technology. In: Handbook of Burns Volume 1: Acute burn care. (Marc G. Jeschke, Lars-Peter Kamolz, Folke Sjoberg and Steven E. Wolf: eds.), Springer, 2011.

Branski LK, Herndon DN, Byrd JF, Kinsky MP, Lee JO, Fagan SP, Jeschke MG. Transpulmonary thermodilution for hemodynamic measurements in severely burned children. Crit Care: 2011; 15: R118.

Brooks NC, Song J, Boehning D, Kraft R, Herndon DN, Jeschke MG. Propranolol restores impaired hepatic PI3K/AKT signaling after burn injury. Mol Med: 2012; 18: 707 - 711.

Cartotto R, Philp L, McRae M, Shah A. The 3P's: Assessment of wound viability when debriding with a tourniquet or epinephrine tumescence. Journal of Burn Care and Research: 2011; 32: S170.

Cartotto R. Respiratory Care of the Burn Patient. In: Handbook of Burns. Ed: Jeschke, M. Springer Wien (173-193), 2011.

Cheung AM, Jeschke MG. What's New in Shock. Shock: 2011 Dec; 36 (6): 529-531.

Culleton S, Breen D, Assad D, Zhang L, Tsao M, Kamra J, Czarnota G, Antonyshyn O, Fialkov J, Barnes E. 5-year Review of Unique Multidisciplinary Nonmelanoma Skin Cancer Clinic. J Cutan Med Surg: 2011; 15(4): 220-226.



Cuschieri J, Johnson JL, Sperry J, West MA, Moore EE, Minei JP, Bankey PE, Nathens AB, Cuenca AG, Efron PA, Hennessy L, Xiao W, Mindrinos MN, McDonald-Smith GP, Mason PH, Billiar TR, Schoenfeld DA, Warren HS, Cobb JP, Moldawer LL, Davis RW, Maier RV, Tompkins RG. Inflammation and Host Response to Injury, Large Scale Collaborative Research Program. Benchmarking outcomes in the critically injured trauma patient and the effect of implementing standard operating procedures. Annals of Surgery: 2012 May; 255(5): 993-999.

Desai KH, Tan CS, Leek JT, Maier RV, Tompkins RG, Storey JD, Altstein L, Baker HV, Balis UG, Bankey PE, Billiar TR, Brownstein BH, Calvano SE, Camp DG 2nd, Perren Cobb J, Cuschieri J, Davis RW, De AK, Finnerty CC, Gamelli RL, Gibran NS, Harbrecht BG, Hayden DL, Hennessy L, Herndon DN, Honari SE, Jeschke MG, Johnson JL, Klein MB, Lowry SF, Maier RV, Mason PH, McDonald-Smith GP, McKinley BA, Miller-Graziano CL, Mindrinos MN, Minei JP, Moldawer LL, Moore EE, Moore FA, Nathens AB, O'Keefe GE, Rahme LG, Remick DG, Schoenfeld DA, Shapiro MB, Smith RD, Sperry J, Storey JD, Tibshirani R, Tompkins RG, Toner M, Xiao W, Shaw Warren H, West MA, Wispelwey B, Wong WH. Dissecting inflammatory complications in critically injured patients by within-patient gene expression changes: a longitudinal clinical genomics study. PLoS Med: 2011 Sep; 8(9): e1001093.

Fialkov JA, Antonyshyn OM, Regev E. Cleft Lip and palate Nasal Deformity: Affecting Patient's Quality of Life. Canadian Journal of Plastic Surgery: 2011; 19(A): 25A.

Finnerty CC, Ju H, Spratt H, Victor S, Jeschke MG, Hegde S, Bhavnani SK, Luxon BA, Brasier AR, Herndon DN. Proteomics improves the prediction of burns mortality: results from regression spline modeling. Clin Transl Sci: 2012 Jun; 5(3): 243-249.

Gauglitz G, Shahrokhi S, Jeschke M. Treatment of Infections in Burns. In: Handbook of Burns Volume 1: Acute burn care. (Marc G. Jeschke, Lars-Peter Kamolz, Folke Sjoberg and Steven E. Wolf: eds.) Springer, 2011.

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Gauglitz GG, Williams FN, Herndon DN, Jeschke MG. Burns: where are we standing with propranolol, oxandrolone, recombinant human growth hormone, and the new incretin analogs? Curr Opin Clin Nutr Metab Care: 2011; 14:176-181.

Ho O, Cartotto R, Woodster D. Correlation of Inhalation Injury Severity with Adverse Outcomes. Canadian Journal of Plastic Surgery: 2012; 20 (2):57-152.

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Huang T, Dibildox M, Branski LK, Herndon DN. Encopresis in Patients with Perineal and Perianal Burn Contractures. Journal of Burn Care & Research: 2011; 32(2): S157.

Inatsu A, Kogiso M, Jeschke MG, Asai A, Kobayashi M, Herndon DN, Suzuki F. Lack of Th17 Cell Generation in Patients with Severe Burn Injuries. J Immunol: 2011 Sep; 187(5): 2155-

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Jeschke MG. Therapie von Verbrennungsnarben. Narbenbehandlung in der Praxis. Editors Dr G Gaulitz and Dr J Schauber. Unimed. 71-83, 2011.

Jindal K, Shahrokhi S. Education in Burns. In: Handbook of Burns Volume 1: Acute burn care. (Marc G. Jeschke, Lars-Peter Kamolz, Folke Sjoberg and Steven E. Wolf: eds.) Springer, 2011.

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### **INVITED LECTURES**

Cartotto R: American Burn Association Annual Meeting, Seattle, Washington, United States, 24 April 2012. Presenter: Education Symposium: Outpatient care of burn patients.

Dibildox M: University Hospital, Inselspital, Berne, Inselspital, Switzerland, 15 March 2012. Presenter: 1/ Choosing patient tailored hemodynamic monitoring, oxygen delivery targets and therapies in burn patients. 2/ The major burn patient: old and new aspects in pathophysiology and therapies. 3/ Update on insulin therapy in the critically ill: What are the new Pros?

Jeschke M: 10th European Postgraduate Course in Neonatal and Pediatric Intensive Care, Bern, Switzerland, March 2012. Invited Speaker: 1/ Patient tailored hemodynamic monitoring in burn patients. 2/ The major burn patient: old and new aspects in pathophysiology and therapies. 3/ Update on insulin therapy in the critically ill: new pros.

Jeschke M: Annual Conference on Shock, Norfolk, Virginia, 2011. Presenter: Calcium and ER stress: central elements in various pathophysiologic responses.

Jeschke M: Australian New Zealand Burns Association 2011 ASM, Brisbane, Australia, 2011. Presenter: 1/ Propranolol and hypertrophic scarring. 2/ Dermal Substitutes, what is new? 3/ Burns in the Future.

Lipa J: American Society of Plastic Surgeons, Denver, Colorado, 26-27 September 2011. 1/ Speaker: Reconstructive Bowl 2011: Mentor vs. Mentee. 2/ Panelist: Use of Acellular Dermal Matrices in Breast Surgery: An Evidence-Based Review.

Lipa J: American Society for Reconstructive Microsurgery, Las Vegas, Nevada, 15 January 2012. Speaker: Break-Out Panel - Maximizing Aesthetics in Reconstructive Breast Surgery.

Lipa I: Duke Perforator Flap Course for Breast Reconstructive Surgery, Durham, North Carolina, 25 February 2012. Faculty: Cadaver Lab: SIEA, Anterolateral Thigh, TUG Flaps; Special Topic: Alternative Donor Sites.

Lipa J: Fifth Annual QMP Reconstructive Surgery Symposium, Chicago, Illinois, 18 November 2011. 1/ Faculty: Nipple-Areola Reconstruction. 2/ Faculty: Secondary Adjustments in Breast Reconstruction: Breast Asymmetries and the Contralateral Breast. 3/ Session Moderator: Breast Reconstruction. 4/ Faculty: Breast Reconstructon with Implants and Flaps in the Context of Radiation.

### RESEARCH AND INVESTIGATIONS

Characterization of burn induced hepatic dysfunction. Jeschke M: National Institutes of Health (NIH) (USA). (\$850,000 2010 - 2015)

Glucose control in severely burned patients: mechanism and therapeutic potential. *Jeschke M*: Physicians Services Incorporated Foundation (The) (PSI). (\$165,000 2011 - 2013)

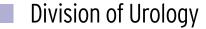
Impact of psychosocial factors and treatment choice on return to work in carpal tunnel syndrome. Binhammer P, Anastakis D, Dvali L, Von Schroeder H: American Foundation for Surgery of the Hand. (\$16,000 2010 - 2012)

Leader's Opportunity Fund application. Jeschke M: Canada Foundation for Innovation (CFI). (\$1,100,000 2010 - 2015)

Multicentre Transfusion Trigger Study. Palmieri T, Cartotto R: University of California (Davis, CA), US Army Department of Defence/American Burn Association. (2011 - 2013)

Research Grant from Stryker Canada. Fialkov J: Stryker Canada. (2011 - 2012)





Dr. L. Carr Associate Professor

Dr. S. Herschorn Professor Dr. L. Klotz Professor

Professor (Division Head) Dr. R. Kodama Dr. R. Nam Associate Professor Dr. V. Venkateswaran Associate Professor

### **PUBLICATIONS**

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### **INVITED VISITS**

Klotz L Chilean Urology Association, Puerto Varas, Chile, 6 October 2011. Invited Guest: Prostate Cancer Management.

Klotz L: Heinrich-Heine University, Dusseldorf, Germany, 17 October 2011. Visiting Professor: Management of prostate cancer.

Klotz L: Italian Society of Urology, Rome, Italy, 24 October 2011. Invited Guest Speaker: Management of prostate cancer.

Klotz L: European School of Oncology, Rotterdam, Netherlands, 14 January 2012. Chair: 'Overdiagnosis of Cancer'. First International Conference on active surveillance.

Klotz L: Universite de Montreal, Montreal, Quebec, Canada, 19 January 2012. Visiting Professor.



Klotz L: FM 98.7, Toronto, Ontario, Canada, 22 January 2012. Speaker: Prostate Cancer and the Black Community Call in show.

Klotz L: D. Crawford, Vail, Colorado, United States, 25 January 2012. Distinguished Speaker: International Prostate Cancer Update: Multiple talks.

Klotz L: European Urology Association, Davos, Switzerland, 4 February 2012. Distinguished Speaker: Multiple talks. European Winter Urology Forum.

Klotz L: California Medical Association, Glendale, California, United States, 7 March 2012. Presenter: New Approaches to Prostate Cancer. Audio-Digest CME/CE program.

Klotz L: AUA, Atlanta, Tennessee, United States, 20 May 2012. Chair: Session: Imaging and prostate cancer.

Kodama R: Society of Genitourinary Reconstructive Surgeons, SIU Symposium, Berlin, Germany, 16 October 2011. Moderator: Urethral Stricture and Bladder Neck Contracture After TURP.

Kodama R: 5th Masterclass of Genito-Urethral Surgery, London, England, 31 October 2011. Presenter: Pelvic Fracture Urethral Stricture Management.

Nam R: Juravanski Cancer Centre, LHIN GU Oncology Meeting, Niagara-on-the-Lake, Ontario, Canada, 2 November 2011. Invited Speaker: Surgical Management of Post Radiation Failure for Prostate Cancer.

Nam R: Canadian Urological Association, Banff, Alberta, Canada, June 2012. Presenter: Population-based study of long-term rates of surgery for urinary incontinence after radical prostatectomy for prostate cancer.

Venkateswaran V: Prostate Cancer Canada Network, Toronto, Ontario, 27 July 2011. Diet, Nutrition and Exercise in relation to prostate cancer.

Venkateswaran V: Australian Prostate Cancer Research Centre, Queensland University of Technology, Brisbane, Australia, 9 October 2011. Invited Speaker: Chemoprevention of prostate cancer in the last decada.

Venkateswaran V: 5th ICNAM Conference, Brisbane, Australia, 14-15 October 2011. 1/ Invited Speaker: Dietary agents in the chemoprevention of prostate cancer. 2/ Co-Chair of Session: Nutrition impact on epigenome and genome.

Venkateswaran V: Ferring Pharmaceutical, San Diego, California, 7 November 2011. Invited Speaker: Combination therapy using Docetaxel in prostate cancer.

### **RESEARCH AND INVESTIGATIONS**

A Phase IIb Randomized, Placebo- and Active Comparator (Tolterodine)-Controlled, 2 Part Clinical Study of the Efficacy and Safety of MK-4618 in Patients with Overactive Bladder. Herschorn S: Merch & Co. Inc. (\$15,000 2011 - 2012)

A randomized placebo-controlled double-blind multicentre study of Fesoterodine 8 mg in overactive bladder patients with sub-optimal response to tolterodine 4 mg ER. Herschorn S: Pfizer Inc. (USA). (\$15,000 2011 - 2012)

Analysis of novel methylation biomarkers distinguishing aggressive from indolent prostate cancer. Bapat B, Klotz L, Vesprini D, van der Kwast T, Fleshner N, Venkateswaran V, Lockwood G: Ontario Institute for Cancer Research. (\$619,440 2011 - 2013)

CUOG/Abbott Award--Capsaicin and docetaxel anti-tumour effect in prostate cancer. Klotz L, Sasaki H: Canadian Urologic Oncology Group. (\$10,000 2011 - 2012)

Effect of Desmopressin and in combination with Docetaxel in prostate cancer. Klotz L, Venkateswaran V: Ferring Pharmaceuticals Inc. (\$100,000 2010 - 2012)

ETS gene translocations as biomarkers of prostate cancer. Seth A, Nam R: National Cancer Institute of Canada (NCIC). (\$619,500 2008 - 2013)

Investigation of DNA methylation markers for improved prediction of aggressive disease in prostate cancer patients. Bapat B, van der Kwast T, Fleshner N, Klotz L, Venkateswaran V, Vesprini D, Lockwood G, Zlotta A: Prostate Cancer Research Foundation of Canada. (\$120,000 2011 - 2013)

Microchip-based devices for the analysis of circulating prostate cancer markers. O'Kelley S, Nam R, Sargent E, Wheeler A: Canadian Institutes of Health Research (CIHR). (\$1,735,400 2011 - 2015)

Micronutrients and Prostate Cancer: Prevention to Treatment. Venkateswaran V, Klotz L, Fleshner N, Sugar L, Teahan S: Canadian Institutes of Health Research (CIHR). (\$247,413 2006 - 2012)

Muscle Cell Mediated Therapy for Stress Urinary Incontinence. Carr L, Herschorn S: Cook Myosite. (\$10,000 2009 - 2012)



Randomized trial of polyacrilamide gel versus collagen for female SUI. Herschorn S: Contura. (\$25,000 2011)

Utilizing metformin to enhance the efficacy of androgen deprivation therapy in prostate cancer. Venkateswaran V, Klotz L, Fleshner N, Sugar L, Pollak M, Colquhoun A: Prostate Cancer Research Foundation of Canada. (\$119,996 2010 - 2012)

Utilizing metformin to enhance the efficacy of androgen deprivation therapy in prostate cancer. Venkateswaran V, Klotz L, Fleshner N, Sugar L, Pollak M, Colquhoun A: CIHR Institute of Nutrition, Metabolism and Diabetes. (\$92,605 2010 - 2012)

### **HONOURS RECEIVED**

Klotz L: Chairman, 5th World Urologic Oncology Federation Conference, Berlin, Germany. 2011.

Klotz L: Honorary Member, Chilean Society of Urology. 2011.

Klotz L: Queen's Jubilee Medal, Government of Canada. May 2012.

Klotz L: William Cooner Lectureship, University of Alabama, Alabama, United States. July 2011.

Kodama R: A.W. Bruce Undergraduate Teaching Award, Urology, Dept of Surgery, Faculty of Medicine, University of Toronto, Canada. 2011.

Nam R: Faculty Postgraduate Teaching Award Surgical, Urology, Dept of Surgery, Faculty of Medicine, University of Toronto, Ontario, Canada. June 2012.



39 Gallie Day Gala Dinner: David Latter, Nathalie Fazel, Kristen Davidge.



40 Gallie Day Gala Dinner: Ren-ke Li, Ori Rotstein.



# Toronto East General Hospital

Laura Tate, Surgeon-in-Chief

### **HEADS OF DIVISIONS**

Dr. P. Bernick General Surgery
Dr. P. Weiler Orthopaedics

Dr. L. Dvali Plastic and Reconstructive Surgery

Dr. R. Singal Urology

A year of reflection and forward thinking follows our successful succession planning and selection of a new Chief of Surgery at Toronto East General Hospital. I am extremely pleased to announce Dr. Carmine Simone, Thoracic Surgeon will be our next Chief. Carmine's leadership in Critical Care Initiatives provincially and our Level One Thoracic Program give us strengths in focusing on building relationships and programs with insight and strong family values.

This has been an exciting year as we showcase a unique partnership built between Sunnybrook and TEGH under Dr. Rajiv Singal's vision to develop a robotic surgical program with shared fund raised capital and operating funding. The Davinci Robot has been installed and training near completion for initially five urologists and allied health staff to begin robotic laproscopic prostatectomy surgery in July 2012. This is thought to be the first example of such partnership and highlights our close relationship with the Odette Cancer Centre.

A focus on quality initiatives has also shaped our agenda this year with a theme of "TEGH - Your Choice for Safe Surgery" Our surgical Website was updated with individual surgeons interests, contact information and biography's with links for post-op information pamphlets and a virtual journey patients can access highlighting the quality initiatives they will encounter from initial referral to recovery. These include Best Practices in General Surgery, Early Recovery after Surgery, Safer Healthcare Now, thrombo -prophylaxis protocols, and pain control. Other important quality initiatives included review and prevention indwelling catheter injuries, esophagectomy review, standardization of Mortality and Morbidity Reporting and the development of monthly combined Quality Grand Rounds between Surgery and Medicine.

Final mention of our continued recognition and delivery of outstanding surgical education must be made at all levels of trainees. We aim to deliver a memorable experience true to the values of a collegial workplace with truly a wide clinical array of problems in an ethnically diverse population and an eye on excellence.

## DIVISION OF GENERAL/THORACIC SURGERY

Our Division of General and Thoracic Surgery continues to be thriving and growing to meet the needs of our community. Minimally invasive surgery and our commitment to bariatric surgery continue to be successful. Under the leadership of Paul Bernick as Chair of all TEGH Multidisciplinary Cancer Conferences (MCC), our partnership with the radiation oncology group at the Sunnybrook Odette Cancer Centre has developed and has led to an improved and highly successful regular tumor board (MCC). We continue to be able to successfully treat a wide variety of benign and malignant general surgery conditions with very low wait times, though wait times are increasing as fiscal pressures increase. Our divisional teaching effectiveness scores continue to be high as we have committed surgeons and outstanding teachers.

Thoracic Surgery continues to achieve its goals of being the preferred Level 1 Centre for common chest surgery needs in the province. We have combined forces with the Division of Respirology to set up TEGH's Chest Centre, a model of care for prevalent respiratory and thoracic surgical ailments. To date, we continue be amongst Ontario hospitals with the lowest wait times for lung and esophageal cancer surgery while continuing to increase our volumes to meet the Level 1 standards. Dr. Najib Safieddine. He brings added training and expertise in minimally invasive thoracic surgery (VATS). We have begun our Endobronchial Ultrasound (EBUS) program at TEGH as well.

Our partnerships with Sunnybrook, Odette Cancer Centre, North York General Hospital and Royal Victoria Hospital (Barrie) continue to thrive. Other regions throughout the province have sought our help in establishing Diagnostic Assessment Programs along

University of Toronto | Department of Surgery 2011-2012 Annual Report | **169** 



the lines of our successful Time to Treat rapid access lung cancer program. We continue to reach out to our community colleagues in Toronto, North York and Scarborough offering our services and expertise. We recently held a teaching session for the North East Respirology Group.

### **UROLOGY**

Clinical focus includes oncology and MIS. TEGH is the first community hospital to work collaboratively with our Sunnybrook partners to purchase the Davinci Robot for laproscopic prostatectomy surgery. Dr. Singal has worked tirelessly to see this process through its inception, fundraising and finally implementation. The clinical fellowship in Endourology has now entered its tenth year and senior level urology residents continue to spend elective rotation time at TEGH. Formal Multidisciplinary Cancer conferences are now well established with Odette and continue to support best practices in patient cancer care. Initiatives to promote patient safety include an overhaul of our perioperative antibiotic use, the development of a continence program and the development of a project to track hospital wide catheter related injuries.

### **ORTHOPEDICS**

We have a strong focus on general orthopaedics, both elective and in the emergency treatment of fractures and other injuries of the musculoskeletal system. Our patient population consists of both our local community, as well as patients from our surrounding communities, reaching to underserviced areas such as the near north including Manitoulin Island, Sudbury, Timmins, Cochrane and Kirkland Lake.

Although the main focus of our elective surgery involves primary and revision arthroplasty of the hip and knee, our group also engages in a variety of other elective surgery such as spine, sports medicine of the knee, ankle and shoulder as well as foot and ankle reconstruction. We continue to perform a high volume of elective arthroplasty procedures, about 550 primary arthroplasty and about 50 revison arthroplasty cases annually. In the last few years, there has been an emphasis on providing high quality, fiscally responsible service in a timely fashion. Our division under Dr. Weiler's care has certainly been professing their efficiencies and excellence for several years and is hoping for recognition as funding models change.

### **PLASTIC SURGERY**

Surgical safety is a priority within our group. Like our colleagues, we have implemented the World Health Organization (WHO) Surgical Safety Checklist. Additionally our Division has been actively participating in numerous measures associated with the University of Toronto Best Practices Group including the standardization of the selection and administration or preoperative antibiotics. We strive not only to meet our already high standards, but to participate in initiatives to further improve the quality and safety of patient care. We are starting to see an increasing number of referrals for post bariatric body contouring. Our goal is to standardize patient selection, preop preparation, post op orders electronically and work with other body contouring plastic surgeons to form a virtual center of excellence within the city and beyond with combined mortality and morbidity rounds and an increased presence centrally within the provincial bariatric program.



41 Gallie Day Gala Dinner: Sylvia Perry, Stephanie Neilson, Nancy Condo, Darina Landa, Alina Gaspar, Val Cabral



## **Division of General Surgery**

Dr. M.A. Aarts **Assistant Professor** 

Dr. P.E. Bernick Assistant Professor (Division Head)

Dr. J. Cyriac Lecturer Dr. J. Dickie Lecturer

Dr. T. Gilas **Assistant Professor** 

Dr. H. Sawires Lecturer Dr. C. Simone Lecturer

Dr. R. Zeldin **Assistant Professor** 

## Division of Orthopaedics

Dr. M. Catre, Jr. Lecturer

Assistant Professor Dr. J.W. Kraemer Dr. G. Maistrelli Associate Professor

Dr. F. Mastrogiacomo Lecturer

Dr. P. Weiler Assistant Professor (Division Head)

Dr. P. Wong Assistant Professor

### **PUBLICATIONS**

Sonnadara R, Van Vliet A, Safir O, Alman B, Ferguson P, Kraemer W, Reznick R: Orthopaedic Boot Camp: Examining the effectiveness of an intensive surgical skills course. Surgery: 2011 Jun; 149(6): 745-749.

Sonnadara R, Garbedian S, Safir O, Nousiainen M, Alman B, Ferguson P, Kraemer W, Reznick R: Orthopaedic Boot Camp II: Examining the retention rates of an intensive surgical skills course. Surgery: 2012 Jun; 151(6):803-807.

Trajkovski T, Veillette C, Backstein D, Wadey V, Kraemer B: Resident self-assessment of operative experience in primary total knee and hip arthroplasty: is it accurate? Canadian Journal of Surgery: 2012; 55:153-157.

Zahrai A, Chahal J, Stojimirovic D, Schemitsch E, Yee A, Kraemer W: Quality of life and educational benefit among orthopaedic surgery residents: a prospective, multicentre comparisonof the night float and the standard call systems. Canadian Journal of Surgery: 2011; 54: 25-32.

### **RESEARCH AND INVESTIGATIONS**

It's more than competency-based education, it's radical curricular reform: a prescription for a new model of residency education. Reznick R, Kraemer W, Ferguson P, Alman B, Safir O, Sonnadara R. MOHLTC. (\$1,700,000 2009 - 2013)



## Division of Plastic and Reconstructive Surgery

Lecturer Dr. B. Beber

Dr. L. Dvali Assistant Professor (Division Head)

Dr. A. Kesarwani Lecturer

Dr. L.J. Tate **Assistant Professor** 

## Division of Urology

Dr. R. Groll Lecturer

Dr. R.K. Singal Lecturer (Division Head)

Dr. P. Vlaovic Lecturer



42 Gordon Murray Lecture: Philippe Menasché.



43 Gallie Day Gala Dinner: Philippe Menasché, Rosalind Bradford, James Rutka.



## University Health Network

Shaf Keshavjee Md, Surgeon-In-Chief

### **HEADS OF DIVISIONS**

Dr. V. Rao, MD Cardiac Surgery Dr. L. Rotstein, MD **General Surgery** Dr. M. Tymianski, MD Neurosurgery Dr. N. Mahomed, MD Orthopaedics Dr. S. Hofer, MD Plastic Surgery Dr. T. Waddell, MD Thoracic Surgery Dr. N. Fleshner, MD Urology Vascular Surgery Dr. T. Lindsay, MD

### **DIVISION OF CARDIAC SURGERY**

The Division of Cardiovascular Surgery at the Peter Munk Cardiac Centre witnessed profound change during the past academic year. After a 22 year tenure as Division Chief, Dr. Tirone David passed the torch onto Dr. Vivek Rao. After a period of uncertain clinical volumes and competing technology, the Division is once again rejuvenated with the prospect of active recruitment into the novel areas of minimally invasive valve surgery, surgical therapies for cardiac arrhythmias and hybrid therapies for aortic disease. Generously supported by transformative gifts from Peter and Melanie Munk as well as the DeGasperis Family, the Division is well positioned to both recruit new surgeons and support innovative technology. Endowed chairs are currently held by four faculty members (Drs. David, Feindel, Rao and Yau). The Division continues to have an active clinical fellowship program attracting trainees from around the world under the direction of Dr. Stephanie Brister. The cardiac transplant and LVAD program, under the direction of Dr. Vivek Rao, continues to expand and is an active participant in major clinical trials in heart failure and mechanical circulatory support. Dr. Ralph-Edwards, in partnership with the Hypertrophic Cardiomyopathy team, continues to offer leading edge surgery to patients across the country. The research efforts, under the direction of Dr. Terrence Yau, Renke Li and Richard Weisel, successfully launched the province's first stem cell program for cardiac disease in addition to maintaining extramural support from the Heart and Stroke Foundation (Drs. Yau, Weisel, Rao and Li) and CIHR (Drs. Weisel and Li). Dr. R.J. Cusimano was awarded the Wightman-Berris award for Undergraduate Teaching. The Division anticipates

expanding the breadth of our surgical programs and reinforcing our reputation as a world-leading cardiac surgical center

### **DIVISION OF GENERAL SURGERY**

The Division of General Surgery, in conjunction with Patient Education led an initiative to implement and evaluate the UHN My Surgery binder and a General Surgery Patient Education Passport. The Division hosted visiting Professors for three named Lectureships: The John Palmer Lecturer was Dr. Michael Choti from Johns Hopkins School of Medicine; The Peter Crossgrove Lecturer was Dr. Louis Hugh Francescutti from the University of Alberta and the Langer Lecturer was Professor Malcolm Dunlop from the University of Edinburg (Canadian Surgical Forum in London, Ontario). Faculty promotions included Todd Penner who was promoted to Assistant Professor and Carol-Anne Moulton to Associate Professor. The Division welcomed two new members; Dr. Fayez Quereshy, a MIS Surgical Oncologist with research interests in the area of Operations Management and Process-level Evaluation and Optimization, and Dr. Karen Devon, an endocrine surgeon with research interest in Medical Ethics. Led by Allan Okrainec, David Urbach, and John Hagen (Humber River Regional Hospital), General Surgery hosted the first annual Update in Minimally Invasive Surgery on November 25, 2011. This educational event drew over 160 registrants, and was an unqualified success. The UHN Multidisciplinary Bariatric Program at the Toronto Western site continues to grow as the centerpiece of the University of Toronto Collaborative Bariatric Network. Thanks to the efforts of Tim Jackson, the program was designated a Level 1A Facility by

University of Toronto | Department of Surgery 2011-2012 Annual Report | **173** 



the American College of Surgeons Bariatric Surgery Center Network (ACS BSCN) Accreditation Program, the highest level of accreditation for Bariatric Centers of Excellence. Over 300 bariatric procedures were done at TWH in 2011-2012. Tim Jackson has spearheaded UHN's participation in the American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP). Our membership in this program will provide a wealth of research and qualityimprovement opportunities for General Surgery.

Faculty in General Surgery hold current grants totalling more than \$5,000,000 from National granting agencies; the Canadian Institute of Health Research (CIHR), Ontario Institute for Cancer Research, Canadian Liver Foundation, the Ministry of Research and Innovation, the Royal College of Physicians and Surgeons of Canada, the Medical Council of Canada, Physicians Services Incorporated (PSI), the Ontario Research Fund, The Canadian Cancer Society Research Institute, National Cancer Institute of Canada and International Grants; National Institutes of Health (NIH).

### **DIVISION OF NEUROSURGERY**

### **Promotions:**

Drs. Gelareh Zadeh and Mojgan Hodaie were promoted to the ranks of Assistant Professor and Associate Professor, respectively, at the University of Toronto.

### **Appointments:**

Michael Fehlings was appointed as President of the Cervical Spine Research Society (CSRS) for 2011-12. Dr. Eric Massicotte was appointed Director of Undergraduate Teaching for Neurosurgery city-wide. After an international search, Dr. Michael Tymianski was selected as Head of the Division of Neurosurgery at UHN, effective June 1, 2011. Taufik Valiante is Co-Director of the Krembil Neuroscience Center's Epilepsy Program, which has been designated a Luminary Site by Natus/XLTEK. The partnership with Natus, suppliers of EEG equipment to the Epilepsy Monitoring Unit, will allow the Epilepsy Program at Toronto Western Hospital to provide state-of-the-art epilepsy care at significantly reduced costs.

### **New Recruitments:**

Three successful international searches were held over the year for new faculty recruits in academic neurosurgery for positions in Cerebrovascular (Dr. Ivan Radovanovic), Neuro-Oncology (Dr. Paul Kongkham) and Spine (Dr. Mohammed Shamji).

### **Departures:**

Our Division was deeply saddened with the passing of our friend and colleague Dr. Abhijit Guha who passed away on November 8, 2011. On February 25, 2012, the Division of Neurosurgery gathered with colleagues, family and friends at Trinity College Chapel to celebrate the life of Dr. Ab Guha and the ceremony included tributes by a number of guests from within and outside of our Division.

### Awards:

Dr. Michael Fehlings and Dr. Charles Tator were corecipients of the Reeve-Irvine Research Medal for

contributions to promoting repair of the damaged spinal cord and recovery of function. Dr. Michael Fehlings received a Golden Axon Award from the Brain Mapping Foundation, given in recognition of individuals who have demonstrated world-class leadership in neuroscience and have reached out to their local communities. Dr. Michael Fehlings was also named the 2012 Mayfield Lecturer and the Mayfield Medalist by the famed Mayfield Clinic.

Drs. Fred Gentili and Dr. Charles Tator received a 2011 Council Award from the College of Physicians and Surgeons of Ontario in recognition of outstanding Ontario physicians who have demonstrated excellence and come closest to meeting society's vision of an "ideal physician".Dr. Mojgan Hodaie received the 2012 Bernard Langer Surgeon-Scientist Award by the University of Toronto, Department of Surgery at the 38th Gallie Day held May 4, 2012

Andres Lozano received a 2012 Pioneer in Medicine Award from the Society for Brain Mapping and Therapeutics. Andres Lozano was also selected as the recipient of the 2012 Herbert Olivecrona Medal from the Karolinska Institute

Dr. Charles Tator will have a lecture named in his honor by the American Association of Neurological Surgeons/Congress of Neurological Surgeons (AANS/ CNS) Section on Neurotrauma and Critical Care. This is a well-deserved recognition of Dr. Tator's tremendous accomplishments and contributions in the field. Charles Tator was also the recipient of the American Spinal Injury Association (ASIA) Lifetime Achievement Award, for his contributions to the world of spinal cord injury care. Charles Tator was presented with the Outstanding Achievement Award by the Medico-Legal Society of Toronto in recognition of significant contributions to the society, the professions and the community at large. Gelareh Zadeh was awarded the 2012 Lois H Ross Resident Advocate award by PAIRO

### **Grants:**

The Division of Neurosurgery, Collectively, brought in \$4,395,788.31 in peer-review research grants (amount for this academic year only). Andres Lozano was awarded a renewal of his Tier 1 Canada Research Chair in Neuroscience. The CRC Secretariat awards Tier 1 Chairs for seven-year terms to outstanding researchers acknowledged by their peers as world leaders in their

Andres Lozano was the lead investigator of a new PET Scan Suite, whose opening at Toronto Western Hospital was celebrated by UHN, the Toronto General & Western Foundation and the Edmond J. Safra Philanthropic Foundation on Sep. 19, 2011. Michael Tymianski was UHN's sole lead recipient of an Ontario Research Fund-Research Excellence Round 5 Award from the Ministry of Research and Innovation for his project entitled "TRPM7 Inhibitors for the Treatment of Stroke and Myocardial Ischemia".

### **Fellowships:**

The Division continues to have an active clinical fellowship program attracting trainees from around the world and we had the pleasure of training 10 fellows this past academic year. This year, Dr. Boris Krischek,



clinical fellow in Neuro-oncology and skull base surgery was the recipient of the Zane Cohen Fellowship Achievement Award from the Department of Surgery at this year's Gallie Day Dinner.

### Visiting Professors to our Division at TWH:

Dr. Jacques Morcos, Professor of Clinical Neurosurgery, University of Miami, 29th Annual E. Harry Botterell Visiting Lectureship in Neurosurgery, Nov. 10-11, 2011

Christopher Ogilvy, Director, Endovascular and Operative Neurovascular Surgery, Harvard Medical School and Massachusetts General Hospital, City-Wide Rounds at Toronto Western Hospital, Mar. 30, 2012

Christopher Shaffrey, Harrison Distinguished Teaching Professor of Neurological Surgery, University of Virginia, 37th William S. Keith Visiting Professorship, Jun. 11-12, 2012

#### Chairs:

Dr. Mark Bernstein was appointed as the inaugural Barrick-Wilkins Chair in International Surgery. The Division of Neurosurgery has committed \$1M towards the UHN Head of Division of Neurosurgery Chair.

### **DIVISION OF ORTHOPEDIC SURGERY**

### Clinical:

Christian Veillette: UHN-DADOS: an open source Webbased platform for orthopaedic patient outcome data collection and reporting.

Raj Rampersaud: OrthoSaves implemented systematic capture of adverse events data across the Division of Orthopaedics.

Recruited Jas Chalal new orthopaedic sports surgeon between UHN and WCH.

Johnny Lau: Obtained volume funding for complex foot and ankle cases from MOHLTC

Division of Orthopaedics works closely with Altum Health to deliver care for work related MSK injures.

### Teaching:

Tim Dwyer & Ogilvie-Harris: Developed Curriculum for post-graduate sports medicine education for the University of Toronto.

Khal Syed: Developing Curriculum for post graduate training in joint replacement surgery

### Research:

Raj Rampersaud: PI for ISEC study for development and evaluation of Spine Assessment Centres across Ontario. Funding Source MOHLTC amount \$2.8 million.

Division wide there were over 30 peer reviewed publications

Rajiv Gandhi: Developed Osteoarthritis bio-bank. The bio-bank became operational last year and has over 300 samples to date.

Rajiv Gandhi: Established a translational research program in cartilage regeneration in collaboration with Gordon Keller and April Craft for the McEwen Centre

The Orthopaedic Division has raised over \$20 million for the Arthritis Campaign

Wayne Marshall: Established Academic Advisory Board for the Osetoarthritis Research Centre

Recruited Anthony Perrucio clinical scientist: Epidemiology

### Awards:

Christian Veillette: Canadian Orthopaedic Association Award of Merit in recognition of leadership and innovation in orthopaedic informatics, technology and communication

### **DIVISION OF PLASTIC SURGERY**

The Division of Plastic & Reconstructive Surgery, University Health Network has recruited a number of key individuals to start in the 2012 - 2013 academic year.

Dr. Steven J. McCabe was appointed to the position of Director of the UHN Hand Program at the Toronto Western Hospital. His goals are to transform the Hand Program into a University wide collaborative group, to develop a program in hand transplantation, and to invigorate the academic activities of the Hand Program. Dr. Anne O'Neill was recruited the completion of her microsurgery fellowship program. Liz Starenkyj, RN, MN has taken on the position of Clinical Nurse Coordinator - Plastic Surgery Breast Restoration Program.

### **Research Grant Funding**

We are very pleased to report the successful results of the annual peer-reviewed funding awards from the Canadian Institutes of Health Research (CIHR) for the projects entitled Development of a decision support tool in post mastectomy breast reconstruction surgery and "Understanding Bangladeshi women's experiences of humanitarian surgical missions".

The Division also received funding for 3 years from the Canadian Breast Cancer Foundation (CBCF), for a very innovative surgical trial entitled the use of human acellular dermal matrix in one-stage implant breast reconstruction: A multicenter, randomized, controlled trial and a Physicians Services Incorporated Foundation (PSI) grant for a trainee project entitled "Defining the Structural Integrity of Decellularized Tracheal Allografts".

During the past 2011 - 2012 academic year, divisional members have published [26] peer-reviewed papers, presented [28] scientific papers and participated in [15] invited lectures. Dr. Hofer was invited as a Visiting Professor in February 2012 to present on New Concepts in Head and Neck Reconstruction at the University of Basil in Switzerland.

### **Awards**

Dr. Toni Zhong received a 3-year Career Development Award from the American Society of Clinical Oncology (ASCO) - Conquer Cancer Foundation.

### Surgeon - Scientist Plastic Surgery Residents

We are extremely proud of our two Surgeon - Scientist Plastic Surgery Residents that have received the significant recognition for their graduate work. Jennica Platt in the MSc Surgeon - Scientist Program received the inaugural GlaxoSmithKline-Canadian Breast



Cancer Foundation (CBCF) - Ontario Region Physician Fellowship Award, as well as the Frederick Banting and Charles Best Canada Graduate Scholarships Masters Award from the Canadian Institutes of Health Research (CIHR). Siba Haykal in the PhD Surgeon - Scientist Program received the Canadian Institutes of Health Research (CIHR) Vanier Scholarship Award for her PhD work in Tracheal Allotransplantation.

### **DIVISION OF THORACIC SURGERY**

New programs that have been initiated by the Division of Thoracic Surgery are the LungMets Program (Drs. Waddell and Cypel) and the Program in Robotic Thoracic Surgery (Drs. Yasufuku and Waddell). Dr. Marcelo Cypel began his faculty position in September 2011 as an Assistant Professor and has already established a successful research lab and had a major impact on the Extracorporeal Life Support Program. Dr. Gail Darling has accepted major roles in important Thoracic Surgery organizations. She is now Chair of the Thoracic Surgery Specialty Committee of the Royal College and Chair, Board of Regents for the International Association for the Study of Lung Cancer. She is a member of the Executive Committees of Lung Site Committee for National Cancer Institute of Canada Clinical Trials Group, and the General Thoracic Surgery Club. Several national and international special recognition awards were received by Dr. Shaf Keshavjee in recognition of the transformative impact that Ex Vivo Lung Perfusion (and organ repair in general) is having on the field of organ transplantation. These were the Zellers Senior Scientist Award (Cystic Fibrosis Canada), the Distinguished Lecturer in Respiratory Science Award (CIHR Institute of Circulatory & Respirology Health & Canadian Thoracic Society) and the Roche Award for Excellence in Science (The Transplantation Society). Dr Jonathan Yeung (Supervisor S Keshavjee) received the First Prize at Gallie Research Day for his PhD thesis work. Dr. Tom Waddell is now the Thomson Family Chair in Translational Research. Dr. Kazuhiro Yasufuku won the Best Referenced Paper Award (Japanese Association for Thoracic Surgery). Teaching awards were awarded to Dr. Gail Darling (Gail E. Darling Award for Excellence in Undergraduate Teaching0 and Dr. Tom Waddell (Robert J. Ginsberg Award for Excellence in Postgraduate Teaching). Dr. Wael Hanna is currently one of the Thoracic Surgery residents and received a McGill Fellowship Award. Visiting Professors for 2011-12 academic year were: Dr. Sean Grondin (University of Calgary), Dr. Malcolm Brock (Johns Hopkins), and Dr. David Sugarbaker (Harvard). Another highly successful Toronto Thoracic Surgery Refresher Course was held in June 2012 and included the following Visiting Faculty - Dr. Robert Cerfolio (Alabama), Dr. Drew Bethune (Halifax), Dr. Nasser Altorki (New York) and Dr. Eugenio Pompeo (Rome). Prior to the Refresher Course the annual EBUS Training Course was again hoasted by Dr. Kazuhiro Yasufuku. The academic year concluded with Pearson Day, an annual celebration of clinical and laboratory research by trainees in our Division. The Pearson Day Visiting Professor was Dr. Eric Vallieres from Seattle.

### **DIVISION OF UROLOGY**

The Division of Urology at University Health Network has continued to exemplify the model of academic surgery. The Division is focused on 3 major areas, urologic oncology (focused at the TGH and PMH sites), kidney transplantation (at TGH site) and functional urology/neuro-urology (based at TWH site).Our division has grown in 2011-12 with the appointment of Dr. Girish Kulkarni. His focus will be on health services research in urological oncology. The Division has had a banner academic year with over 3 million dollars in peer reviewed grant capture largely in the area of urologic oncology with teams led by Drs Jewett, Finelli, Fleshner, Kulkarni, and Trachtenberg (all as PI). Our group has published over 60 publications including such prestigious journals as Journal of Clinical Oncology and Lancet. From a clinical point of view, our bladder neurostimulation program continues to grow and is the largest in Canada. Our robotics program led by Dr Finelli has now completed over 300 radical prostatectomies. Other notable awards in 2011-2012 were prestigious career recognition awards to Dr Jewett from the American and Canadian Urological Associations and the Society of Urologic Oncology. Dr Fleshner was awarded a Queen's jubilee medal.

### **DIVISION OF VASCULAR SURGERY**

The Division of Vascular Surgery at UHN has had an active year with several clinical firsts. These Canadian firsts include the initial renal artery denervation procedure, and the first Anaconda fenestrated EVAR graft implantation in Canada. Both procedures were performed with partners from Interventional Radiology, Nephrology and Cardiology. The Division remains committed to minimally invasive procedures and continues to advance the practice of EVAR using branched and fenestrated grafts to treat thoracoabdominal aneurysms and peri-renal aneurysms. Dr George Oreopoulos was appointed to the position of University of Toronto, Division of Vascular Surgery Program Director. The Division published 13 papers this year with Dr. Rubin having publications in Circulation, Nature, PLoS One and Journal of Biological Chemistry. The Division has established two new speciality clinics this year; Vascular malformation clinic headed by Dr KW Johnston in conjunction with Interventional Radiology from both the Hospital for Sick Children and Toronto Western, and the Thoracic Outlet Syndrome clinic headed by Dr Graham Roche Nagle in conjunction with physiotherapy and Dr Vern Campbell from St Michael's Hospital.



### **Division of Cardiac Surgery**

Dr. S.J. Brister Associate Professor Dr. R.J. Cusimano Associate Professor

Dr. T.E. David Professor Dr. C.M. Feindel Professor Dr. R.K. Li Professor Dr. A.C. Ralph-Edwards Lecturer

Dr. V. Rao Professor (Division Head) Associate Professor Dr. G. Ropchan

Dr. H. Scully Professor Dr. R.D. Weisel Professor Dr. T.M. Yau Professor

### **PUBLICATIONS**

Alba AC, Delgado DH, Rao V, Walter S, Guyatt G, Ross HJ. Are endothelial progenitor cells a prognostic factor in patients with heart failure? Expert Rev Cardiovasc Ther. 2012 Feb;10(2):167-

Algarni KD, Maganti M, Yau TM. Predictors of low cardiac output syndrome following isolated coronary artery bypass surgery: Trends over 20 years. Annals of Thoracic Surgery 2011; 92:1678-

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### **INVITED VISITS**

Brister SJ: Canadian Cardiovascular Congress, Vancouver, British Columbia, 23 October 2011. Predictors of hospital mortality after surgery for ischemic mitral regurgitation.

Brister SJ: CBC: The World at 6, Toronto, Ontario, Canada, November 2011. Speaker: Employee wellness.

Brister SJ: Medtronics Canada, Toronto, Ontario, Canada, 17 November 2011. Lecturer: Contemporary blood management for the Cardiac Surgical Patient.

Brister SJ: Maclean's Magazine, Toronto, Ontario, Canada, 29 February 2012. Invited Commentator: Women only trials re: ICD implementation issues.

David TE: San Raffaelle Hospital - Professor Otavio Alfieri, Milan, Italy, 12 September 2011. Visiting Professor: Late ouctomes of aortic valve sparing operations.

David TE: Lecco Hospital, Lecco, Italy, 13 September 2011. Visiting Professor: Aortic valve sparing operations - techniques and outcomes.

David TE: 45th Convegno di Cardiologia 2011, Milan, Italy, 14 September 2011. Guest speaker: (1) Aneurysms of the ascending aorta and arch. (2) Bicuspid aortic valve disease: timing of surgery

David TE: European Association for Cardio-Thoracic Surgery, Lisbon, Portugal, 4 October 2011. Invited Speaker: Aortic valve replacement with Hancock II bioprosthesis: the gold standard on bioprosthetic durabilty? Simultaneous lunch sessions.



David TE: Henri Mondor Hospital - University of Paris, Paris, France, 5 October 2011. Visiting Professor: Aortic valve sparing operations: techniques and outcomes.

David TE: The Heart Hospital, London, United Kingdom, 7 October 2011. Visiting Professor: (1) Aortic valve sparing operations: techniques and outcomes. (2) Aortic valve replacement with Hancock II: the gold standard on bioprosthetic durability?

David TE: 11th Annual Meeting of the Chinese Society of Thoracic and Cardiovascular Surgery, Xiamen, China, 11 November 2011. Invited Speaker: Future of cardiac surgery.

David TE: 7th International Live Case Meeting - Leipzig-Dallas International Heart 2011, Leipzig, Germany, 1 December 2011. Live surgical demonstration: David I operation for aortic root aneurysm in bicuspid aortic valve disease.

David TE: Department of Surgery of North Shore University Hospitals, Long Island, New York, United States, 13 January 2012. Visiting Professor: Future of Cardiac Surrgery Surgical Grand Rounds and wet-lab demonstration of aortic valve spaing operation.

David TE: Society of Thoracic Surgeons, Fort Lauderdale, Florida, United States, 30 January 2012. Invited Speaker: Surgical Repair of ventricular septal defect after myocardial infarction. Outcomes from the Society of Thoracic Surgeons Database Discussion of peer reviewed presentation.

David TE: Annual meeting of the 21st Century Cardiothoracic Surgical Society, Boca Raton, Florida, United States, 17 February 2012. Invited Lecturer: Anatomy of the aortic root.

David TE: University of Pittsburgh Continuing Medical Education. Florida Valve 2012, Orlando, Florida, United States, 22 February 2012. Invited Speaker: Long-term Outcomes of Stented Bioprostheses vs. Primary Aortic Valve Repair - Can We Attain a Gold Standard in Selected Patients?

David TE: University of Utah, Salt Lake City, Utah, United States, 26 March 2012. Visiting Professor: (1) Aortic valve sparing operations. (2) Aortic valve replacement with Hancock II bioprosthesis: the gold standard on bioprosthetic durability?

David TE: University of Helsinki, Helsinki, Finland, 12 April 2012. Visiting Professor: Contemporary techniques in mitral an aortic valve reconstructive surgery. (1) Live demonstration of aortic valve sparing operation. (2) Live demonstration of mitral valve repair for prolapse of the anterior leaflet. (3) Lecture: Barlow valve: principles of repair and outcome. (4) Lecture: Bicuspid aortic valve: repair or replace?

David TE: 2012 Australasian Thoracic Aortic Symposium Conference Melbourne, Victoria, Australia, 20 April 2012. Guest speaker: (1) Aortic valve sparing operations: techniques and outcomes. (2) Aortic root abscess. (3) Treatment of acute type A aortic dissection.

David TE: American Association for Thoracic Surgery, New York, New York, United States, 26 April 2012. Invited Speaker: Aortic Symposium Guest speaker: Principles of Aortic Root Repair & Long Term Follow-up.

David TE: American Association for Thoracic Surgery, San Francisco, California, United States, 28-30 April 2012. (1) Invited Speaker: Developing the Academic Surgeon Surgical Creativity. (2) Invited Speaker: Surgical Skills Course Post-Infarction Ventricular Septal Defect Repair. (3) Invited Speaker: Chordal Replacement with PTFE sutures for Mitral Valve Repair: A 25-Year Experience. (4) Invited Discussant: "A Prospective Randomized Comparison of Three Contemporary Bioprosthetic Aortic Valves—Should Hemodynamic Performance Influence Device Selection?"

David TE: St Francis Hospital, Hartford, Connecticut, United States, 3 May 2012. Invited Speaker: 48th Annual Robert M. Jeresaty Cardiovascular Symposium. Recent advances in aortic and mitral valve surgery.

David TE: Cliniques Universitaires Saint-Luc, Brussels, Belgium, 22 June 2012. Invited Lecturer: 12th Symposium on Aortic Valve Reconstructive Surgery. Twenty years experience with aortic valve sparing surgery.

Li RK: 5th Multi-disciplinary Symposum of Ontario Chinese Professors, Muskoka, Ontario, 1 July 2011. Invited Speaker: Translational Research in Cardiovascular Science.

Li RK: Winnipeg Heart International Conference, Institute of Cardiovascular Sciences, Winnipeg, Manitoba, 12 October 2011. Invited Speaker: Bone marrow origins of resident cardiac stem-cell niche govern repair after infarction in aged mice.

Li RK: 6th Annual Congress of the German Society of Stem Cell Research, German Society for Stem Cell Research, Dusseldorf, Germany, 20 November 2011. Invited Speaker: Myocardial resident bone marrow stem cells govern repair after infarction in aged mice.

Weisel R: American Heart Association, Orlando, Florida, United States, 12-14 November 2011. (1) Early career: lunch with the Mentor. (2) Biomaterials for cell constructs. (3) Facilitator: Hot Topics: cell and gene therapy. (4) Facilitator: Myocardial protection/intraoperative management.



Weisel R: The American Academy of Cardiovascular Perfusion, New Orleans, Louisiana, United States, 28 January 2012. Cardioplegia: past, present and future.

**Weisel R:** Society for Thoracic Surgical Education, La Jolla, California, United States, 31 March 2012. Cardiac regeneration by stem cell therapy.

Weisel R: Trillium Health Centre, Mississauga, Ontario, Canada, 30 May 2012. Stem cell therappy for cardiac regeneration.

**Weisel R:** 10th World Congress of Adaptive Medicine, ISAM 2012, Bucharest, Bucuresti, Romania, 7 June 2012. Cardiac restoration by tissue engineering.

Yau TM: Canadian Cardiovascular Congress, Vancouver, British Columbia, 27 October 2011. Lamy Impact of clopidogrel on patients with ACS undergoing coronary bypass surgery: The PRACTICE study.

Yau TM: 21st Century Cardiothoracic Surgical Society, Boca Raton, Florida, United States, 19 February 2012. Setting up a cardiac stem cell therapy program. (Entirely in the OR).

#### RESEARCH AND INVESTIGATIONS

An angiogenic progenitor cell niche in the uterus: potential implications for cell therapy. *Li R-K: Canadian Institutes of Health Research (CIHR).* (\$681,120 2008 - 2013).

An RCT of women's adherence to women-only, home-based and traditional cardiac rehabilitation (CR4HER). *Grace SL, Pilote L, Arthur HM, Stewart DE, Oh P, Melvin K, Sternberg L, Brister SJ: Heart and Stroke Foundation of Canada (HSFC).* (\$369,204 2009 - 2013).

Chitosan hydrogel with immobilized growth factors for cell therapy in myocardial infarction. *Radisic M, Li R-K: Heart and Stroke Foundation of Ontario.* (\$210,648 2010 - 2013).

Electrophysiological implications of regenerative therapy. Yau TM, Nanthakumar K, Backx P: Heart and Stroke Foundation of Canada (HSFC) (Ontario). (\$89,365 2009 - 2012).

Facilitators and barriers to effective discharge following open heart surgery: Patients' and nurses' experiential accounts. *Lapum J, Fredericks S, Micevski V, Yau TM: Ryerson New Faculty SRC Development Fund.* (\$10,000 2010 - 2012).

Harnessing the immune system to achieve cardiac restoration by allogeneic cell transplantation. *Li R-K: Canadian Institutes of Health Research (CIHR).* (\$698,984 2010 - 2015).

Improving transfusion practice and clinical outcomes in cardiac surgery. Karkouti K, Cursio C, Pendergrast J, Selby R, Wasowicz M, Yau TM: Innovation Fund. (\$207,000 2011 - 2013).

NanoMed Fab: a nanofabrication centre for personalized medicine. *Zheng G, Allen C, Chan W, Gariepy J, Jaffrey D, Li R-K, Liu M, Rottapel R, Walker G, Wilson B: Canada Foundation for Innovation (CFI).* (\$2,486,515 2009 - 2014).

Regenerative Medicine and Nanomedicine, Nanotechnology - enabled image - guided interventions (NanoIGI) in vascular and lung diseases. *Zheng G, Li R-K, Chang W, Wilson B, Yasufufu K: Canadian Institutes of Health Research (CIHR), Team Grant.* (\$2,317,260 2011 - 2016).

Screening for dysphagia in patients following prolonged intubation: Validation of the Toronto bedside swallowing screening test. *Martino R, Granton J, Ivanov J, Yau TM: Canadian Institutes of Health Research (CIHR).* (\$212,077 2011 - 2014).

The cardiac regeneration project: quantitative cell tracking and response for cardiac regenerative approaches (CARE Project). Li R-K, Weisel RD, Jaffray D, Neverova I, Sefton M, Wilson B: Canadian Institutes of Health Research (CIHR). (\$2,287,690 2006 - 2012).

The design and planning of a randomized controlled trial to evaluate a tailored cardiovascular surgical patient education intervention in reducing post-hospital discharge complications and readmission rates. *Fredericks SM, Yau TM: Canadian Institutes of Health Research (CIHR).* (\$140,000 2011 - 2013).

The Regenerative Medicine (REMEDI) Project. Weisel RD, Jaffray D, Keating A, Keller G, Kotra L, Liu P, Li R-K, Sefton M, Wright G: Canadian Foundation for Innovation, Ontario Research Fund. (\$14,400,000 2006 - 2012).

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Ultrasound-targeted gene delivery to enhance cell engraftment in the aged heart after ischemic injury. *Li R-K, Weisel RD: Canadian Institutes of Health Research (CIHR), Operating Grant.* (\$291,680 2011 - 2015).



#### **HONOURS RECEIVED**

Cusimano R: Wightman-Berris Teaching Award, University of Toronto. 2012.

Li R-K: Lister Prize, Department of Surgery, Faculty of Medicine, University of Toronto. 2012.

# Division of General Surgery

Dr. M.S. Cattral Professor Dr. T. Cil **Assistant Professor** Dr. S.P. Cleary Assistant Professor Dr. J. Escallon Associate Professor Dr. A. Gagliardi Associate Professor

Dr. S. Gallinger Professor Dr. A. Ghanekar Lecturer Dr. R.M. Gorczynski Professor Dr. D. Grant Professor Dr. P. Grieg Professor

Dr. T. Jackson **Assistant Professor** Dr. W.L. Leong Assistant Professor

Professor Dr. D. McCready

Associate Professor Dr. I. McGilvray Dr. C.A. Moulton **Assistant Professor** Dr. C.A. O'Brien **Assistant Professor** Dr. A. Okrainec **Assistant Professor** 

Dr. T.P. Penner Lecturer

Dr. M. Reedijk Associate Professor Dr. L.E. Rotstein Professor (Division Head) Dr. M. Selzner **Assistant Professor** 

Dr. B.R. Taylor Professor

Dr. R.D. Urbach Professor

Dr. A. Wei Assistant Professor Dr. H. Weizel Associate Professor Dr. L. Wright **Assistant Professor** 

#### **PUBLICATIONS**

Aarts MA, Okrainec A, Glicksman A, Pearsall E, Victor JC, McLeod RS. Uptake in advanced recovery after surgery (ERAS) strategies for colorectal surgery at academic teaching hospitals and impact on total length of hospital stay. Surgical Endoscopy: 2012; 26(2):442-450.

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- Wright FC, Gagliardi AR, Fraser N, Quan ML. Adoption of surgical innovations Factors influencing use of sentinel lymph node biopsy for breast cancer. Journal of Surgical Oncology: 2011; 18(4): 379-386.



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### **INVITED VISITS**

Cleary SP: 3rd Bienniel Congress of the Asian Pacific Hepato Pancreato Biliary Association, Melbourne, Australia, September 2011. (1) Presenter: Waterjet Liver transection techniques. (2) Invited Speaker: Resection vs Tranplantation for HCC.

Cleary SP: CAGS Post-graduate Course in Minimally Invasive Surgery, Canadian Surgical Forum, London, Ontario, Canada, September 2011. Invited Speaker: Laparoscopic Surgery in the Cirrhotic patient.

Cleary SP: University of the West Indies: Princess Margaret Hospital & Doctors Hospital, Nassau, Bahamas, December 2011. AHPBA Invited Professor: The evolving paradigm of resection for colorectal liver metastases.

Cleary SP: 12th Annual AHPBA Congress, Miami, Florida, United States, 6 March 2012. (1) Lecturer: Lunch with the Professor: Bile Duct Injuries. (2) Speaker: AHPBA Update Lecture: Portal Vein Embolization.

Gagliardi A: Canadian Partnership Against Cancer Annual Meeting, Toronto, Ontario, Canada, 2011. Cancer patient engagement strategies.

Gallinger S: 15th Annual Meeting Collaborative Group of the Americas on Inherited Colorectal Cancer, Montreal, Quebec, Canada, 10 October 2011. New genetic insights in familial colorectal cancer type X.

Gallinger S: OCI Faculty Lunch Interactive Discussion Sersion Series, Toronto, Ontario, Canada, 20 April 2012.

Grant D: Indraprastha Apollo Hospitals Sarita Vihar, New Delhi, Delhi, India, 8 October 2011. Invited Speaker: Small for Size Syndrome.

Greig P: King Faisal Specialist Hospital & Research Center, Riyadh, Saudi Arabia, 10-12 October 2011. Visiting Professor: (1) The Current Status of Liver Transplantation: The University of Toronto Perspective. (2) Advances in Hepato-Biliary Surgery: The University of Toronto Perspective.

Greig P: ASTS Winter Meeting, Miami Beach, Florida, United States, 13 January 2012. Invited Speaker: Future's So Bright, Gotta Wear Shades: Sustaining Junior Faculty session.

Greig P: AHPBA - State of the Art Lecture, Miami Beach, Florida, United States, 10 March 2012. Invited Lecturer: Living Donor Liver Surgery Today.

Greig P: University of Massachusetts Grand Surgical Rounds, Worchester, Massachusetts, United States, 4 April 2012. Visiting Professor: Living Donor Liver Transplantation: Applications to HPB Surgery.

Leong WL: Department of Surgery, Saskatoon, Saskatchewan, 5 July 2011. Current controversy of locoregional control of breast cancers, will Z0011 and MA.20 change your surgical practice?

McCready D: Canadian Surgical Forum, London, Ontario, Canada, September 2011. Invited Lecturer: Shibata Lecturer Evolution of sentinel node biopsy in breast cancer.

McCready D: American College of Surgeons, San Francisco, California, United States, October 2011. Invited Speaker: Technology as a force for improved diagnosis and treatment in breast

McCready D: Kuwait Cancer Control Centre, Kuwait City, Kuwait, November 2011. Invited Speaker: (1) The Evolution of Sentinel Node Biopsy. (2) Formation and Operation of a Rapid Diagnostic Centre for Breast Cancer.

Moulton CA: Rogano, Vienna, Austria, 26 August 2011. Facilitator: Rogano Conference on Medical Education 2011.

Moulton CA: Cleveland Clinic Surgical Grand Rounds, Cleveland, Ohio, United States, 30 September - 1 October 2011. Speaker: (1) Failing to slow down when you should: reactions to error in surgery. (2) Slowing down when you should: the keys to expert surgical judgment and decision making

Moulton CA: Vancouver General Hospital, Vancouver, British Columbia, Canada, 19 October 2011. (1) Slowing down when you should: the keys to expert surgical judgment and decision making. General Surgery Grand Rounds. (2) Risk, response and reprocussions: living well with uncertainty in clinical practice Centre for Health Edcuation Scholarship (CHES) Rounds.



Moulton CA: Research in Medical Education (RIME), Denver, Colorado, United States, 7 November 2011. First do no harm: Balancing competing priorities in surgical practice.

Moulton CA: Research in Medical Education (RIME), Denver, Colorado, United States, 9 November 2011. Surgeon Reaction to Error: Harnessing a Powerful Source of Feedback.

Moulton CA: National Museet Annual Meeting, Copenhagen, Denmark, 26 November 2011. Supervisors perspective - Operating from the other side of the table.

Moulton CA: American Society of Clinical Oncology (ASCO) - Gastrointestinal Cancer Symposium, San Francisco, California, United States, 20 January 2012. Survival analysis of PETCAM: A multicenter randomized controlled trial of PET/CT versus no PET/CT for patients with resectable liver colorectal adenocarcinoma metastases. (Poster Presentation)

Moulton CA: 2013 Canadian Conference on Medical Education (CCME), Banff, Alberta, Canada, 15 April 2012. Education Research Symposium: Emotion in Clinical Practice: Useful, Unnecessary or Dangerous? Invited Lectures and Presentations

Moulton CA: Hospital of Saint Raphael, New Haven, Connecticut, United States, 18 April 2012. The Surgeon's Four Phase Reaction to Error Grand Rounds Lecture.

Moulton CA: XXI International Congress Mexican Association of Endoscopic Surgery, Puerto Vallarta, Mexico, 26 April 2012. Slowing down when you should: key to surgical judgment.

Moulton CA: University of Rochester's Medical Center, Rochester, New York, United States, 15 June 2012. Slowing down when you should: the keys to expert surgical judgment and decision making.

Okrainec A: Society of American Gastrointestinal and Endoscopic Surgeons, San Diego, California, 7-11 March 2012. Getting more for your money: Laparoscopic rectal surgery provides similar short term outcomes and shorter length of stay at comparable costs to open surgery.

Okrainec A: Assocation for Surgical Education, San Diego, California, March 2012. Telesimulation: A novel and effective approach for laparoscopic skills training globally- an analysis of experience in 9 countries.

Reedijk M: Society of Surgical Oncology, San Antonio, Texas, 2011. (1) Radioguided seed localization of nonpalpable invasive and in situ breast carcinomas: a prospective, randomized trial. (2) The urokinase-type plasminogen activator is a direct JAG1-mediated Notch target in breast cancer.

Reedijk M: CHCH TV, Toronto, Ontario, Canada, 15 December 2011. Invited Lecturer: PMH Doves of Hope Campaign TV interview.

Reedijk M: IDSC Cancer Stem Cell Meeting, Washington, District of Columbia, United States, 12 March 2012. Invited Speaker: A Phase I Study of Various Administration Schedules of RO4929097 with Multi-parameter Assessment (Biomarkers, Pharmacokinetics, Pharmacodynamics) in Patients with Advanced Solid Cancers.

Selzner M: The Cleveland Clinic Foundation Centre for Continuing Education, Cleveland, Ohio, United States, 19 September 2011. Invited Speaker: Ex vivo liver perfusion for the storage, assessment, and repair of marginal grafts.

Urbach DR: American College of Surgeons, San Francisco, California, 24 October 2011. A practical comparison of comparative effectiveness research in the US and Canada.

Wei A: Sault Ste Marie, Oncology Group, Sault Ste Marie, Ontario, Canada, 17 November 2011. Invited Speaker: Aggressive Metastasectomy for Colorectal liver metastases Oncology Rounds.

Wei A: Scarborough Hospital, Division of General Surgery, Toronto, Ontario, Canada, 9 February 2012. Invited Speaker: Wei AC Aggressive Metastasectomy for Colorectal liver metastases Surgical Grand Rounds.

Wei A: American Hepato-pancreato-biliary association, Miami, Florida, United States, 7 March 2012. Speaker: Resection of multi-site metastases from colorectal cancer: feasibility and interim results of a multi-centre prospective phase II study.

Wei A: AHPBA, Miami, Florida, United States, 9 March 2012. Presenter: Resection of multi-site metastases from colorectal cancer: Feasibility and interim results of a multi-centre prospective phase II study.

Wei A: Canadian Association of General Surgery Review Course 2012, Toronto, Ontario, Canada, 13 April 2012. Speaker: Pancreatitis Review Lecture: Pancreatitis.

Wei, Alice: 19th annual CSSO meeting, Toronto, Ontario, Canada, 24-27 April 2012. Speaker: (1) Resection of Multi-site metastases from colorectal cancer: feasibilty and interim results of a multi-centre prospective phase II study. (2) Resection of multi-site metastases from colorectal cancer:Interim results of a multi-centre prospective phase II study.



Wei A: Ontario Institute for Cancer Research Health Services Research Program, Toronto, Ontario, Canada, 17 May 2012. Presenter: Improving quality of care for pancreatic cancer: developing evidence based clinical pathways for patients undergoing pancreatic cancer surgery.

### RESEARCH AND INVESTIGATIONS

ACOSOG Z5041. Phase II study of preoperative gemcitabine and erlotinib plus pancreatectomy for patients with operative pancreatic adenocarcinoma. Pisters P, Wei A: ACOSOG. (\$9,000 USD 2010 - present).

A deliberative KTE platform for designers and users of medical devices. Lehoux P. Denis I. Miller F. Urbach D, Williams-Jones B: Canadian Institutes of Health Research (CIHR). (\$99,941 2011 - 2012).

Adult-to-adult living liver transplantation (A2ALL). Grant D, Levy G, Clarke H, Abbey S, Holtzman S: National Institutes of Health (NIH) (USA). (\$1,500,000 USD 2009 - 2014).

A Multi-Institutional Phase II Study of Neoadjuvant Gemcitabine and Oxaliplatin with Radiation Therapy in Patients with Pancreatic Cancer. Zalupski Z, Dawson L, Wei AC, Ringash J: Sanofi Aventis, Industry sponsor of investigator initiated study. (2008 - present).

A Phase II study of Perioperative Chemotherapy plus Panitumimab in Patients with Colorectal Cancer Liver metastases. Cleary SP, Welch S, Moore M: Amgen Canada Inc (Mississauga, ON). (2010 - present).

Assessment of Risk for Colon Tumors in Canada (ARCTIC). Hudson T, Gallinger S, et al. Ontario Research Fund (ORF). (\$2,200,000 2010 - 2013).

Association between allergy history, immunologic genetic variants and pancreatic cancer risk. Cotterchio M, Gallinger S, Greenwood C: Canadian Institutes of Health Research (CIHR). (\$625,293) 2010 - 2013).

Biliary Complications after Paediatric Liver Transplantation: Incidence, Impact and Opportunities for Improvement. Ghanekar A, Kamath B: Ashley's Angels Foundation, Liver Transplant Research. (\$8,616 2012 - 2013).

Breast cancer risk assessement using optical transillumantion spectroscopy. Lilge L, Bordeleau L, Knight JA, Lewittes LR, McCready DR, Lickley HLA: Canadian Institutes of Health Research (CIHR). (\$661,302 2005 - 2014).

Breast cancer risk assessment using optical transillumination spectroscopy. Lothar L, McCready DR: Canadian Institutes of Health Research (CIHR). (\$661,302 2009 - 2014).

Characterizing factors that influence physical activity promotion in primary care by realist systematic review. Gagliardi A, Abdallah F, Barnsley J, Ciliska D, Faulkner G: Canadian Institutes of Health Research (CIHR). (\$99,455 2011 - 2012).

Clinical Validation of PRODIGI, a New Handheld Optical Imaging Technology for Real-time Intraoperative-guidance of Breast Tumour Resection. Wilson B, Done S, Easson A: Canadian Institutes of Health Research (CIHR). (\$160,000 2011 - 2013).

Stelfox HT, Tallon I, Kirkpatrick AW, Straus S, Evans D, Gagliardi A, Hameed SM, Hudak P, Nathens A, Quan H, Santana M: Canadian Institutes of Health Research (CIHR). (\$631,942 2011 - 2014).

Development of PRODIGI, a Handheld Optical Imaging Technology for Real-time Intraoperativeguidance of Breast Tumour Resection. DaCosta R, Leong WL, Wilson B, Done S, Easson A: Canadian Institutes of Health Research (CIHR), Proof of Principal Grant. (\$145,250 2011 - 2012).

Dynamic case studies and the impact on health policy decision preparedness. Dobrow M, Brouwers M, Burchett H, Hoch J, McBride M, Peacock S, Wright F, Gagliardi A: Canadian Institutes of Health Research (CIHR). (\$450,027 2011 - 2014).

Early Researcher Award. Moulton CA: Ministry of Research and Innovation (MRI) (Ontario). (\$140,000 2011 - 2016).

Establishing a national agenda and research network for shared decision making (SDM) in oncology in Canada. Gagliardi A: Canadian Institutes of Health Research (CIHR). (\$14,990 2011 - 2012).

Establishing priority areas for quality improvement research in cancer surgery. Wei AC, Urbach DR, Taylor B, Bathe O, McLeod R: Canadian Institutes of Health Research (CIHR), Dissemination Events. (\$17,159 2011 - 2012).

Evaluation of a health care policy intervention to change the organization and delivery of lung cancer surgery in Ontario. Urbach DR, Dobrow M, Darling G, Baxter N, Kennedy ED, Wei AC, Gagliardi A, Simunovic M, Coburn N, Sutradhar R, Maziak D, Sundaresan S: Ontario Institute for Cancer Research/Cancer Care Ontario Health Services Research HSR Program, Health Services Research Program. (\$253,321 2009 - 2012).



Expansion of the Gattuso Rapid Clinic for Breast Cancer. McCready DR: Slaight and Gattuso Family Foundation and Princess Margaret Hospital Foundation. (\$2,000,000 2009 - 2018).

Ex Vivo Human Liver Perfusion: Assessment and Repair of Marginal Grafts for Transplantation. Selzner M, Grant D, Levy G, Keshavjee S: Physicians Services Incorporated Foundation (The) (PSI). (\$100,000 2010 - 2012).

Ex Vivo Human Liver Perfusion: Assessment and Repair of Marginal Liver Grafts for Transplantation. Selzner M, Levy G, Grant D: Roche Organ Transplantation Research Foundation. (\$300,000 2010 - 2013).

Exome sequencing of familial colorectal cancer type X. Gallinger S, McPherson I, Woods M: Canadian Cancer Society Research Institute (CCSRI). (\$419,240 2011 - 2014).

Exploring factors that influence breast reconstruction use and outcomes. Phase 1: How do physician attributes influence reconstruction decision making. Musgrave M, Baxter N, Gagliardi A: Canadian Breast Cancer Foundation (CBCF), Ontario Chapter. (\$188,180 2011 - 2013).

Failing To Slow Down When You Should. Moulton CA, Gallinger S, Martimianakis MA: Royal College of Surgeons, Medical Education Research Grant. (\$46,930 2011 - 2013).

Formation and Evaluation of a Rapid Diagnostic Clinic for Breast Cancer. McCready DR: Slaight and Gattuso Family Foundation. (\$12,500,000 2008 - 2018).

Generation of De Novo molecular targets for optical imaging-guided surgical interventions in breast cancer. DaCosta R, Sidhu SA, Leong WL, Easson, Done SJ: Canadian Institute for Photonic Innovations. (\$95,000 2011 - 2012).

Generation of De Novo molecular targets for optical imaging-guided surgical interventions in breast cancer. DaCosta R, Sidhu S, Easson A, Done SJ: Cancer Care Ontario, Cancer Imaging Network of Ontario. (\$70,000 2011 - 2013).

Guided acute resuscitation: does education depend on trainees' interactions and participation (the GUARDED TIP study). LeBlanc V, Piquette D, Moulton CA: Physicians Services Incorporated Foundation (The) (PSI). (\$43,150 2010 - 2012).

Guideline implementation: Developing collaborative capacity for rapid cycle research and application. Gagliardi A, Bombardier C: Canadian Institutes of Health Research (CIHR). (\$322,000 2011 - 2014).

High resolution genetic analysis of genetic loci implicated in colorectal cancer. Hudson T, Gallinger S, Lemire M, Peltekova V: Canadian Institutes of Health Research (CIHR). (\$798,539 2010 - 2015).

Identification and Characterization of Human Liver Cancer Stem Cells. Ghanekar A, Dick J, Dirks P: Canadian Institutes of Health Research, Phase I Clinician-Scientist Training Award. (\$172,500 2009 -2012).

Identification of molecular pathways associated with Notch activation in triple-negative breast cancer. Reedijk M, Moffat J: Canadian Institutes of Health Research (CIHR). (\$346,950 2010 - 2013).

Improving gastric cancer survival: Development and measurement of quality indicators using the RAND/UCLA Appropriateness Method and population-based data analysis. Coburn N, Calvin L, Helyer L, Swallow C, Sutradhar R, Quan ML, McLeod R, Paszat L, Rabeneck L, Gagliardi A: National Cancer Institute of Canada (NCIC). (\$552,466 2008 - 2012).

Improving quality of care for pancreatic cancer: developing evidence based clinical pathways for patients undergoing pancreatic cancer surgery. Wei A, Gallinger S: Ontario Institute for Cancer Research (OICR)/Cancer Care Ontario, Health Services Research Program. (\$128,774 2011 - 2012).

Integrated Molecular Profiling of Patient-Derived Tumor Xenograft Models for Preclinical Evaluation of Targeted Drugs and Biomarker Discoveries (IMPPX Cancer Project). Sui L, Tsao M, Bedard P, Chen E, Oza A, Reedijk M: Ontario Institute for Cancer Research. (\$100,455 2011 - 2012).

Intraoperative fluid therapy for patients undergoing deceased donor renal transplantation: a modifiable risk factor for delayed graft function. McCluskey S, Ghanekar A, Schiff J: Canadian Anesthesiologists' Society. (\$30,000 2011 - 2012).

Judgements and health innovation: How do upstream knowledge transfer and exchange among stakeholders contribute to the design of innovations. Lehoux P, Denis J, Miller F, Urbach DR, Williams-Jones B: Canadian Institutes of Health Research (CIHR). (\$528,453 2010 - 2013).

Metformin use and prostate cancer incidence and mortality: A novel approach to prostate cancer prevention. Fleshner N, Bell C, Lipscombe L, Urbach DR: Canadian Cancer Society Research Institute. (\$160,782 2011 - 2013).

Molecular pathogenesis of Hepatitis C Virus infection. McGilvray I, Heathcote J: Canadian Institutes of Health Research (CIHR). (\$377,000 2009 - 2012).



Normothermic ex vivo liver perfusion as a novel strategy to assess and repair marginal grafts. Markus Selzner: Roche Organ Transplant Research Foundation (ROTRF). (\$300,000 2010 - 2013).

Ontario Familial Colorectal Cancer Registry - Phase III. Gallinger S, and 25 others in Regional Cancer Centres in Ontario: National Institutes of Health (NIH) (USA). (\$4,400,000 USD 2008 - 2012).

Ontario HPB clinical database project. Wei AC: UHN Foundation funding. (2007 - present).

Personalized Medicine with Targeted and Genome-Wide Sequencing. Siu L, Onetto N, Ghai S, Murphy K, Haider M, Jaffray D, Shaw P, Asa S, Tsao M, Kamel-Reid S, McPherson J, Stein L, Jurisica I, Moore M, Oza A, Shepherd F, Leighl N, Liu G, Reedijk M, Chen E, Hedley D, Tsao M, Bedard P, Minden M, Stambolic V: Cancer Care Ontario, Applied Cancer Research Unit Award. (\$1,182,500 2011

Pharmacogenetic Study of Gemcitabine in Pancreatic Cancer: Analysis of Clinical and Observational Trials. Cleary SP: Ontario Institute for Cancer Research. (\$303,812 2011 - 2013).

Phase I pharmacodynamic and high content study of the gamma-secretase inhibitor RO4929097 in patients with recurrent malignant gliomas (MGs) targeting p75NTR to inhibit brain tumour initiating cells (BTICs) and recurrent invasive gliomas. Forsythe P, Chen E, Easaw, J, Hamilton, M, Mason, W, Oza A, Reedjik M; Roldan G, Senger D, Wang L, Zadeh G: Canadian Cancer Society. (\$312,282 2010 - 2013).

Post-menopausal women with luminal A subtype might not require breast radiotherapy. Liu F-F, Fyles A, Bane A, Done S, McCready DR, Miller N, Nielsen T, Nofech-Mozes S, Pintilie M, Voduc D, Whelan T, Chang M: Canadian Institute of Health Research. (\$209,967 2011 - 2013).

Preclinical proof of concept for MCT-485 and MCT-465 in human hepatocellular carcinoma. Ghanekar A: MultiCell Technologies Inc., Sponsored Research Agreement. (\$88,000 2011 - 2012).

Preoperative prediction of microvascular invasion in hepatocellular carcinoma by blood oxygenation level dependent magnetic resonance imaging. Cleary SP: Canadian Liver Foundation. (\$119,450 2011 - 2013).

Preparing international medical graduates for fellowships in Canada: A needs assessment and curriculum development. Okrainec A, Sockalingam S, Tan A, Hawa R, Abbey S, Zaretsky A, Jackson T, Grigoiradis S: University of Toronto, Educational Development Fund. (\$5,000 2011 - 2012).

Pressures on surgeons to "measure up" with their effects on surgical judgement. Moulton CA, Matimianakis T, Kitto S, Murnaghan L: Physicians Services Incorporated Foundation (The) (PSI). (\$98.500 2011 - 2013).

Prioritizing research on interventions to prevent and reduce surgical device-based adverse events. Gagliardi A, Urbach D, Lehoux P, Ross S, Ducey A: Canadian Institutes of Health Research (CIHR). (\$24,628 2011 - 2012).

Phase I pharmacodynamic and high content study of the gamm a-secretase inhibitor RO4929097 in patients with recurrent malignant gliomas (MGs) targeting p75NTR to inhibit brain tumour initiating cells (BTICs) and recurrent invasive gliomas. Forsythe P, Chen E, Easaw, J, Hamilton, M, Mason, W, Oza A, Reedjik M; Roldan G, Senger D, Wang L, Zadeh G: Alberta Cancer Research Institute. (\$27,155 2010 - 2013).

Quantifying the Effect of Notch Inhibition on Tumor-Initiating Cells in Early Phase Clinical Trials of Gamma-Secretase Inhibitor (Roche R04929097) in Advanced, Triple Negative Breast Cancer and Other Solid Malignancies. Reedijk M, Tsao M, Sui L, Ailles L, Oza A: Ontario Institute for Cancer Research. (\$720,000 2010 - 2013).

Randomized clinical trials for breast cancer. McCready DR: National Surgical Adjuvant Breast and Bowel Project (NSABP) Operations Center. (\$3,200 2011).

Remote evaluation of laparoscopic performance using the global operative assessment of laparoscopic skills. Okrainec A, Choy I, Jackson T: Society of American Gastrointestinal and Endoscopic Surgeons. (\$11,259 2011 - 2012).

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McCready D: Accreditation Canada: Leading Practice Award. Gattuso Rapid Diagnostic Centre.

Moulton CA: 2011 Gerald Kirsh Humanitarian Award, The Princess Margaret Hospital Foundation, Ontario, Canada.

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Reedijk M: Gerald Kirsh Award, Princess Margaret Hospital. 2011.

Urbach DR: Best Brains Exchange Travel Award, Canadian Institutes of Health Research, Ontario, Canada.





# Division of Neurosurgery

Dr. M. Bernstein Professor Dr. K.D. Davis Professor Dr. J. Eubanks Professor Dr. M. Fehlings Professor Dr. F. Gentili Professor

Dr. C. Hamani **Assistant Professor** Dr. M. Hodaie Associate Professor Dr. W.D. Hutchison Associate Professor

Dr. A.M. Lozano Professor

Dr. E. Massicotte Associate Professor

Dr. C.H. Tator Professor

Dr. M. Tymianski Professor (Acting Division Head)

Dr. T. Valiante Assistant Professor Dr. A. Velumian **Assistant Professor** Dr. G. Zadeh **Assistant Professor** 

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### **INVITED VISITS**

Davis KD: Technion-Israel Institute of Technology & Rambam Health Care Campus, Haifa, Israel, July 2011. Invited Speaker: Brain Imaging of the Neural Correlates of Pain, Attention and Plasticity.

Davis KD: Tel Aviv University, Sackler Faculty of Medicine, School of Allied Health Professions, Tel Aviv, Israel, July 2011. Invited Speaker: Brain Imaging of the Neural Correlates of Pain, Attention and Plasticity.

Davis KD: Reflex Sympathetic Dystrophy Syndrome Association: Workshop on Imaging Neuroinflammation and Neuropathic Pain, Albuquerque, New Mexico, United States, October 2011. Invited Speaker: Central mechanisms of pain: fMRI analysis.

Davis KD: Society For Neuroscience, 41th annual meeting, Washington, District of Columbia, United States, November 2011. Nanosymposium Chair: Attentional Networks.

Davis KD: BBC Radio 4, United Kingdom, December 2011: The Oath Program on scientific oaths and research ethics (http://www.bbc.co.uk/programmes/b018fllk).

Davis KD: Annual Conference of the Taiwan Association for the Study of Pain, Taiman, Taiwan, Province Of China, March 2012. Keynote Speaker: Individual Factors and Nociceptive Input Contribute to Pain Sensitivity and Brain Abnormalities in Chronic Pain: Clinical Implications and Neuroethical Considerations.



Davis KD: Society of Chinese Bioscientists in America: Toronto Chapter annual Scientific Symposium "Frontiers in Neuroscience and Neurological Diseases", Toronto, Ontario, Canada, March 2012. Invited Speaker: Imaging brain functional and structural abnormalities in chronic pain disorders.

Davis KD: National Cheng-Kung University: Neuron Image Symposium, Tainan, Taiwan, Province Of China, March 2012. Invited Speaker: Structural and Functional Brain Imaging Techniques to Study Pain and Plasticity.

Davis KD: Taipei Veterans General Hospital and National Yang-Ming University, Taipei, Taiwan, Province Of China, March 2012. Invited Speaker: Individual Factors and Nociceptive Input Contribute to Pain Sensitivity and Brain Abnormalities in Chronic Pain: Clinical Implications and Neuroethical Considerations.

Davis KD: Global Television Health News: see http://www.globaltoronto.com/video/virtual+brain/ video.html?v = 2220489302&p = 2&s = dd#family + health, March 2012: "A virtual brain: the key to future medical treatment?" Interviewed for show.

Davis KD: Pain Concern: Airing Pain - The UK radio show for people in pain, United Kingdom, April 2012: Brain Imaging - looking into your pain www.painconcern.org.uk and www.ableradio. com - Interview on Pain and Imaging: see http://www.painconcern.org.uk/2012/04/airing-pain/ show-13-31-brain-imaging-looking-into-your-pain-2

Davis KD: National Institute of Neurological Disorders and Stroke: Neural Interfaces Conference, Salt Lake City, Utah, United States, June 2012. Invited Speaker: Functional and Structural Imaging of Chronic Pain.

Hamani C: Mexican Congress of Neurological Surgery, Acapulco, Mexico, July 2011. Invited Speaker: (1) Deep Brain Stimulation and memory. (2) Deep Brain Stimulation for depression. (3) Deep Brain Stimulation for depression.

Hamani C: Brazilian Symposium of Pain - SIMBIDOR, São Paulo, Brazil, September 2011. Invited Speaker: (1) Evidence for the use of spinal cord stimulation for pain. (2) Translational aspects of DBS for depression. (3) Anterior thalamic deep brain stimulation: Clinical and translational aspects. (4) PPN stimulation in Parkinson's disease. (5) DBS for the treatment of depression.

Hamani C: Congress of Neurological Surgeons, Washington, United States, October 2011. Invited Speaker: Deep brain stimulation for epilepsy.

Hamani C: North American Neuromodulation Society Meeting, Las Vegas, United States, December 2011. Invited Speaker: Deep brain stimulation and memory.

Hamani C: Latin-American Congress of Neurosurgery, Rio de Janeiro, Brazil, April 2012. Invited Speaker: (1) Brain stimulation and memory. (2) Brain stimulation and depression.

Hamani C: Symposium-Society for Biological Psychiatry, Philadelphia, United States, May 2012. Speaker: (1) Deep brain stimulation in the subgenual cingulum for depression. (2) Translational research on deep brain stimulation for depression.

Hamani C: Vanderbilt University, Nashville, United States, April 2012. Visiting Professor: Deep brain stimulation for Depression: Translational aspects.

Hamani C: American Society for Stereotactic and Funtional Neurosurgery Meeting, San Francisco, United States, June 2012. Invited Speaker: Deep brain stimulation for Depression: Translational aspects.

Lozano AM: Fifth Annual Advances in Neurosciences Symposium. Washington Hospital, Fremont, California, 9 July 2011. Invited Speaker: Adjusting the activity of dysfunctional brain circuits with deep brain stimulation.

Tator CH: Medical College of Wisconsin, Milwaukee, Wisconsin, United States, 9 September 2011. Visiting Professor: The Evolution of Research in the Pathophysiology and Treatment of Spinal Cord Injury. The Sanford J. Larson Visiting Professor Lecture and Scientific Day.

Tator CH: Medico-Legal Society of Toronto, Toronto, Ontario, Canada, 14 September 2011. Invited Speaker: Concussions can be Prevented, but are Tough To Treat.

Tator CH: Whiff of Grape, Ontario, Canada, 28 February 2012. Invited Speaker: Spinal Cord Injury Research, Prevention and Treatment.

Tator CH: Ontario Athletic Therapist Association, Kingsbridge, Ontario, Canada, 24 March 2012: Prevention of sports concussions and their complications Conference & AGM: Connecting the

Tator CH: Football Canada Coaches Association (FCCA), Burlington, Ontario, Canada, 25 March 2012. Speaker: Concussions Convention.



Tator CH: Canadian Injury Prevention and Safety Promotion, Vancouver, British Columbia, Canada, 17 November 2011. Speaker: Opening Address - Shedding Light Conference.

Tator CH: Brain Injury Services of Northern Ontario, Thunder Bay, Ontario, Canada, 5 October 2011. Invited Speaker: What Parents, Coaches, Teachers and Trainers Should Know About Concussions.

Tator CH: Empire Club of Canada, Toronto, Ontario, Canada, 30 March 2012. Invited Speaker: Concussions in Hockey: A serious problem affecting amateur and professional players.

Tator CH: American Association for the Advancement of Science (AAAS), Vancouver, British Columbia, Canada, 20 February 2012. Speaker: The Importance of Basic Science: Filling the Pipeline Annual Meeting.

Tator CH: ICORD, Vancouver, British Columbia, Canada, 21 February 2012. Speaker: Special Plenary Lecture. A history of spinal cord injury research during my journey 9th Annual Research Meeting.

Tator CH: The Trauma Association of Canada (TAC), Toronto, Ontario, Canada, 12 April 2012. Lecturer: Prevention of catastrophic injuries in sports and recreation in Canada. The Murray Girotti Injury Prevention Lecturer, Annual Scientific Meeting

Tymianski M: The 3rd Ion Channel Conference on Ion Channels: Structure, Function & Therapeutics, Shanghai, China, 22 July 2011. Invited Speaker: TRPM Channels - new emerging targets for the treatment of tissue ischemia.

Tymianski M: Interventional Neuroradiology Symposium, Toronto, Ontario, Canada, 22 September 2011. Invited Speaker: Surgery of spinal vascular malformations.

Tymianski M: Cdn Society for Pharmacology and Therapeutics, Toronto, Ontario, Canada, 14 June 2012. Invited Speaker: Modern Therapeutics 2012; Advances in physiology, pharmacology, pharmaceutical sciences. Treatment of stroke using PSD-95 inhibitors.

Tymianski M: Canadian Stroke Congress, Ottawa, Ontario, Canada, 4 October 2011. Invited Speaker: Neuroprotection is very much alive as a therapy to support neuronal longevity awaiting recanlization.

Tymianski M: Heart + Stroke Foundation of Canada, Ottawa, Ontario, Canada, 7 December 2011. Reviewer: Scientific review committee.

Tymianski M: CNSF, Ottawa, Ontario, Canada, 8 June 2012. Chair: 47th Annual Congress Chair/ Moderator of Neurosurgery II Platform Presentation

Tymianski M: 5th World Congress on cerebral revascularization, St Louis, Missouri, United States, 19 January 2012. Invited Speaker: The Excimer laser assisted non occlusive anastomosis ELANA bypass: the Utrecht + Toronto experiences also presented a 2nd lecture: 3-D Demonstration of a high-flow bypass. [Trainee Presentation]

Tymianski M: Synposium: Alterations in cerebrovascular autoregulation in cerebrovascular disease, Utrecht, Netherlands, 2 March 2012. Invited Speaker: Using BOLD MRI as a diagnostic tool to gauge hemodynamic alterations in patients with Moyamoya disease.

Tymianski M: University of the Philippines, Manila, Philippines, 15 March 2012. Invited Lecturer: The last Slide: results of the ENACT trial. Presenter: Dr. Michael Tymianski.

Tymianski M: Dept of Neurosurgery, Inkosi Albert Luthuli Hospital, Durban, South Africa, 4 May 2012. Invited Speaker: Evolution of aneurysm surgery-from maximally invasive to minimally invasive and minimally expensive.

Tymianski M: Barrow Neurological Institute, Phoenix, Arizona, United States, 17 May 2012. Invited Speaker: BNI Symposium Aneurysm management in Toronto.

Valiante T: Eastern Association of Electroencephalography, Bromont, Quebec, Canada, 17 February 2012. Invited Speaker: High Frequency Synchronous Activity in the Human Brain during Reading.

#### **RESEARCH AND INVESTIGATIONS**

A bioengineered approach to to enhance recovery following severe traumatic spinal cord injury. Fehlings MG, Shoichet M: Physicians Services Incorporated Foundation (The) (PSI). (\$154,800 2010 -2012).

Antidepressant effects of deep brain stimulation and the serotonergic system. Hamani C: Canadian Institutes of Health Research (CIHR). (\$580,586 2011 - 2015).

AOSpine North America Fellowship Program, 2-year merit award. Fehlings MG, Massicotte EM, Rampersaud YR, Lewis S: AOSpine North America. (\$150,000 2011 - 2013).



Building the UHN advanced therapeutics research platform. Paige C, Fehlings MG et al (over 20 names): Canada Foundation for Innovation (CFI). \$92,255,967 2008 - 2012).

Clinical Project Manager. Fehlings M, Tomar A: Ontario Neurotrauma Foundation (ONF). (\$110,000 2010 - 2012).

Deep Brain Stimulation in an Animal Model of Depression. Hamani C: National Alliance for Research on Schizophrenia & Depression, Young Investigator Award. (\$60,000 USD 2010 - 2012).

Delivery Improvements for Photodynamic Therapy. Lilge L, Eubanks JH, Weersink RA, Wilson BC: Canadian Institutes of Health Research (CIHR). \$430,880 2009 - 2013).

Describing pathophysiology to promote a focal therapy for the treatment of schizophrenia - an animal experimental study. Hamani C: Neuron ERA NET- Canadian Institutes of Health Research. (\$143,000 2011 - 2015).

Determinants of outcomes from traumatic spinal cord injury: Development of a novel classification system to facilitate clinical trials and improved therapeutic strategies. Wilson J, Fehlings MG: Christopher Reeve Foundation. (\$120,000 2011 - 2012).

Differential gene response to cerebral ischemia in rats and non-human primates. Tymianski M: Heart and Stroke Foundation of Ontario (HSFO). (\$150,000 2010 - 2012).

Dopamine and synaptic plasticity in human substantia nigra pars reticulata. Hutchison WD, Dostrovsky JO, Moro E, Hodaie M, Lozano AM: Canadian Institutes of Health Research (CIHR). (\$490,745 2009 - 2014).

Epilepsy brain state classification, assessment, and modulation. Carlen PL, Bardakjian BL, Valiante TA: Ontario Brain Institute. (\$87,585 2011 - 2013).

Evaluating Huperzine-A As A Prospective Treatment For Rett Syndrome. Eubanks JH, Zhang L: Rett Syndrome Research Foundation (USA). (\$50,000 2012 - 2013).

Examination of the neuroprotective role of IgG for spinal cord injury. Fehlings MG: Baxter Healthcare Corporation. (\$125,000 2010 - 2012).

Examination of the therapeutic potential of self-assembling nanofibers in spinal cord injury (Phase 2). Fehlings MG: Tyco Healthcare Group LP (d/b/a Covidien). (\$53,200 2011 - 2012).

Health Applications of Cell Signaling in Mucosal Inflammation & Pain. McCulloch ER, Brumell J, Cvitkovitch D, Davis KD, Finlay B, Fish E, Glogauer M, Jadad A, Jones N, Maksym G, Manolson M, Overall C, Philpott D, Santerre P, Sessle B, Sherman P, Vergnolle N: Canadian Institutes of Health Research (CIHR), Strategic training initiative. (\$1,950,000 2009 - 2015).

Human studies of pain perception. Davis KD, Tenenbaum HC, Diamant NE: Canadian Institutes of Health Research (CIHR). (\$726,452 2007 - 2012).

Incorporation of tractography of acoustic neuromas and surrounding cranial nerves into Leksell gammaplan. Hodaie M, Jaffray D: Elekta. (\$55,000 2010 - 2012).

Intervetebral disc-derived multipotent stem cell rescue of the injured spinal cord. Erwin WM, Inman R, Fehlings M, Mohamed N: AOSpine International & Hansjorg Wyss Foundation. (\$30,000 2011 - 2012).

Investigation and treatment of traumatic axonal dysfunction after spinal cord injury. Fehlings MG: Canadian Institutes of Health Research (CIHR). (\$634,713 2007 - 2012).

Investigation of human piggyBac induced pluripotent stem cells for repair and regeneration of the injured cervical spinal cord. Fehlings MG: Wings for Life Spinal Cord Research Foundation. (\$65,465 2011 - 2012).

Investigation of induced pluripotent stem cells, derived by novel, non-viral transposition reprogramming, as a regenerative strategy for spinal cord remyelination. Fehlings MG, van der Kooy D, Nagy A: Canadian Institutes of Health Research (CIHR). (\$299,424 2009 - 2012).

iPS derived neural stem cells and bioengineered strategies to treat chronic spinal cord injury. Fehlings MG, Nagy A, Shoichet M, van der Kooy D: McEwen Centre for Regenerative Medicine. (\$340,000 2010 - 2012).

Lacosamide Anticonvulsant Actions on Epileptic Tissue. Carlen PL, Valiante TA: UCB Pharma. (\$198,800 2012 - 2014).

Minimally Invasive Drug Delivery Strategy for Acute Spinal Cord Injury Repair. Shoichet M, CH Tator: Canadian Institutes of Health Research (CIHR). (\$516,004 2008 - 2012).

Multimodal investigation in epileptogenesis focusing on new models and experimental tools. Cendes I, Hamani C: FAPESP- Fundação de Amparo a Pesquisa do Estado de São Paulo, Brazil (Foundation to Support Research in the State of Sao Paulo). (\$178,000 USD 2012 - 2016).



Neural Development and Repair Network (NeuroDevNet). Goldowitz D, Fehlings MG, et al (over 70 names): Networks of Centres of Excellence (NCE). (\$19,572,000 2009 - 2014).

Neuroprotective approaches to enhance recovery in cervical spondylotic myelopathy. Fehlings MG: Canadian Institutes of Health Research (CIHR). (\$378,105 2009 - 2012).

Pain-Attention Interactions and the Descending Pain Modulation System. Davis KD: Canadian *Institutes of Health Research (CIHR).* (\$626,420 2010 - 2015).

Pathophysiological mechanisms of dystonia: insights from deep brain stimulation and brain plasticity. Chen R, Hodaie M, Moro E, Wong A, Jog M, Neagu B, Lozano AM, Udupa K: Canadian Institutes of Health Research (CIHR). (\$1,047,605 2012 - 2017).

Pathophysiology of Parkinson's Disease. Chen R, Hodaie M, Lozano AM, Moro E: Canadian Institutes of Health Research (CIHR). (\$949,900 2009 - 2014).

Post-concussion syndrome in professional athletes: A multidisciplinary study. Wennberg R, Tator CH, Cassidy JD, Soklaridis S, Green R, Hazrati L-N, Feinstein A, Keightley M, Davis KD: Physicians Services Incorporated Foundation (The) (PSI). (\$170,000 2011 - 2013).

Preclinical studies on neurological function after spinal cord injury exploring cell transplantation as a potential therapy. Fehlings MG: Create Cord Blood Bank Inc. (\$365,829 2011 - 2014).

Pre-existing patient factors associated with sensorimotor recovery, chronic pain, and brain plasticity following surgical repair of peripheral nerve injuries. Davis KD, Anastakis DI, Katz I: Workplace Safety and Insurance Board (WSIB). (\$348,273 2011 - 2015).

Prospective Randomized Control Trial Surgery vs Radiosurgery for Single Brain Metastases. Zadeh G: National Cancer Institute Canada (NCIC) and Canadian Brain Tumour Foundation. (2009 present).

Psychometric testing of a new scale measuring medical outcomes of dysphagia (MOD) in adult patients with swallowing disorders secondary to head and neck cancer. Martino R, Streiner D, Davis A, Fehlings M: Canadian Cancer Society, Research Institute. (\$424,592 2009 - 2012).

Psychometric testing of a new scale measuring medical outcomes of dysphagia (MOD) in adult patients with swallowing disorders secondary to stroke, cervical spine abnormalities and head and neck cancer. Martino R, Streiner DL, Fehlings MG, Davis AM, Ringash J: Canadian Institutes of Health Research (CIHR). (\$396,289 2009 - 2012).

Regulation and function of kallikreins in spinal cord injury and repair. Scarisbrick IA, Blaber M, Fehlings MG: National Institutes of Health (NIH) (USA). (\$1,654,708 2008 - 2013).

Role of TRM7 channels in myocardial ischemia. Tymianski M: Heart and Stroke Foundation of Ontario (HSFO). (\$377,150 2010 - 2013).

Role of TRPM Channels in Ischemic Brain Damage. Tymianski M: Canadian Institutes of Health Research (CIHR). (\$900,000 2008 - 2013).

Signal processing of EEG for detection and classification of clinical brain states. Valiante T, Bardakjian B, Carlen P: Mathematics of Information Technology and Complex Systems (MITACS), Mitacs-Accelerate Cluster Award. (\$60,000 2011 - 2012).

Spatial and temporal characterization of hippocampal memory processes: studies in the normal brain and individuals with medial temporal-lobe epilepsy and excisions. Valiante T, McAndrews MP, Cohn M, Protzner A: Canadian Institutes of Health Research (CIHR). (\$240,000 2009 - 2012).

Spinal cord injury new emerging team regenerative medicine project. Morshead C, Nagy A, Shoichet M, Stanisz G, Tator C, van der Kooy D Krembil Foundation (The). (\$1,500,000 2011 - 2014).

Spinal cord injury-induced secondary immune depression syndrome. Fehlings MG, Schwab J: Charite School of Medicine Berlin. (\$10,000 2011 - 2012).

Tasker Chair in Functional Neurosurgery. Lozano AM: University Health Network, University of Toronto. (\$2,500,000 1999 - present).

The living myelin sheath: functional organization and role in dynamic modulation of axonal function in CNS. Velumian A, Fehlings MG: Natural Sciences and Engineering Research Council of Canada (NSERC). (\$125,000 2008 - 2013).

The Mammalian Sirtuin SIRT3: A Novel Neuroprotective Factor? Eubanks JH, Mills LR, Nash J: Heart and Stroke Foundation of Ontario (HSFO). (\$154,710 2010 - 2012).

The use of MRI characteristics to predict long-term functional and neurological outcomes after acute spinal cord injury. Fehlings MG: Christopher and Dana Reeve Foundation. (\$9,325 2011 - 2012).

Tissue Engineering Repair Strategies for Spinal Cord Injury. Shoichet M, Tator C: Natural Sciences and Engineering Research Council of Canada (NSERC). (\$135,644 2010 - 2013).



Towards the Correction of Rett-Like Behaviour in MeCP2-Deficient Mice. Eubanks J, Burnham WM, Snead OC, Josselyn S, Zhang L: Canadian Institutes of Health Research (CIHR). (\$746,825 2010 -

Translational Stroke Research. Tymianski M: Canadian Research Chair-Tier 1. (\$1,120,000 2010 -2017).

Transplantation of Human Spinal Cord Stem/Progenitor Cells into the Rat Spinal Cord after Impact/Compression Injury of the Spinal Cord. Tator C, Mothe A: International Foundation of Research in Paraplegia (Zurich). (\$164,066 2011 - 2013).

TRPM7 Inhibitors for the treatment of stroke and myocardial ischemia. Tymianski M: Ministry of Research and Innovation (MRI) (Ontario), Ontario Research Fund (ORF). (\$1,474,417 2011 - 2016).

# **HONOURS RECEIVED**

Hodaie M: Bernard Langer Surgeon Scientis Award, University of Toronto, Department of Surgery, Toronto, Ontario, Canada. 2012.

Lozano AM: Denny Brown Lecture, Boston Society for Neurology and Psychiatry, United States.

Lozano AM: Aitken Lecture, University of Western Ontario, Canada. 2011.

Tator CH: Lifetime Achievement Award, American Spinal Injury Association (ASIA). 2011.

Tator CH: Gold Medal of Honour, Health Research Foundation. This award recognizes truly outstanding individuals whose research and/or contribution to public policies supportive of research and development in Canada have achieved international recognition. February 2012.

Tator CH: Reeve-Irvine Research Medal, Reeve-Irvine Research Center, University of California. This medal is given annually to individuals who have made critical contributions to promoting repair of the damaged spinal cord and recovery of function. March 2012.

Tator CH: Council Award, The College of Physicians and Surgeons of Ontario (CPSO). 2012.

Tator CH: Safety Award, Ontario Trial Lawyers Association (OTLA). This award is given out to an individual that has made a remarkable and extensive contribution towards enhancing safety awareness in their community in Ontario and prevented injury to those around them. June 2012.

# Division of Orthopaedics

Dr. J.R. Davey Associate Professor **Assistant Professor** Dr. W.M. Erwin Dr. R. Gandhi **Assistant Professor** Dr. B.A. Graham Assistant Professor Dr. J. Lau Assistant Professor **Assistant Professor** Dr. S.J. Lewis Dr. N.N. Mahomed Professor (Division Head) Dr. K.W. Marshall **Assistant Professor** Dr. D.J. Ogilvie-Harris Associate Professor Dr. Y.R. Rampersaud Associate Professor Dr. K. Syed Lecturer Dr. C.H. Veillette **Assistant Professor** 

Dr. H.P. von Schroeder Associate Professor

# **PUBLICATIONS**

Alzahrani K, Gandhi R, deBeer J, Petruccelli D, Mahomed NN. Prevalence of no clinically significant improvement following total knee arthroplasty. Journal of Rheumatology: 2011; 38: 753-

Ammendolia C, Stuber K, de Bruin LK, Furlan AD, Kennedy CA, Rampersaud YR, Steenstra IA, Pennick V. Non-operative treatment for lumbar spinal stenosis with neurogenic claudication: A systematic review. Spine: 2012 May; 37(10):E609-616.

Antapur P, Mahomed NN, Gandhi R. Fractures in the elderly: When is hip replacement a necessity? Clinical Interventions in Aging: 2011; 6: 1-7.



- Antapur P, Gandhi R, Mahomed N. Topical and Intra-articular Tranexamic acid in total knee arthroplasty. COA Bulletin: 2011; 93: 33-34.
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- Bono CM, Schoenfeld A, Rampersaud R, Levi A, Grauer J, Arnold P, Fehlings M, Dvorak M, Vaccaro AR. Reproducibility of radiographic measurements for subaxial cervical spine trauma. Spine: 2011; 36(17): 1374-1379.
- Brull R, Prasad GA, Gandhi R, Ramlogan R, Khan M, Chan VW. Is a patella motor response necessary for continuous femoral nerve blockade performed in conjunction with ultrasound guidance? Anesthesia and Analgesia: 2011; 112: 982-986.
- Clough, JFM, Veillette CJH. Orthopaedic Web Links (OWL) A Way to Find Professional Orthopaedic Information on the Internet. Clinical Orthopaedics and Related Research: 2011; 469(7): 2049-2061.
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- Dessouki O, Mahomed NN, Gandhi R. Metabolic Abnormality and the proinflammatory state following hip joint surgey. International journal of clinical rheumatology: 2011; 6: 347-358.
- Fehlings MG, Vaccaro A, Wilson JR, Singh A, W Cadotte D, Harrop JS, Aarabi B, Shaffrey C, Dvorak M, Fisher C, Arnold P, Massicotte EM, Lewis S, Rampersaud R. Early versus delayed decompression for traumatic cervical spinal cord injury: Results of the surgical timing in acute spinal cord injury (Stascis). PLoS One: 2012; 7(2):e32037
- Gandhi R, Antapur P, Mahomed NN. Topical and Intra-articular Tranexamic Acid in Total Knee Arthroplasty. COA Bulletin: Summer 2011; 93: 33-34.
- Gandhi R, Jan M, Smith HN, Mahomed N, Bhandari M. Comparison of Published Orthopaedic Trauma Trials Following Registration In ClinicTrials.gov. BMC Muscoskeletal Disease: 2011; 12: 278.
- Gandhi R, Salonen D, Geerts W, Khanna M, McSweeney S, Mahomed NN. A pilot study of CT detected asymptomatic pulmonary filling defects following hip and knee arthroplasty. Journal of Arthroplasty: 2012; 27(5): 730 - 735.
- Gandhi R, Smith H, Lefaivre KA, Davey JR, Mahomed NN. Complications after minimally invasive total knee arthroplasty as compared with traditional incision techniques: A meta-analysis. Journal of Arthroplasty: 2011; 26(1): 29-35.
- Gandhi R, Smith H, Mahomed NN, Rizek R, Bhandari M. Incorrect use of the Student's t-test in randomized trials of bilateral hip and knee replacement patients. Journal of Arthroplasty: 2011; 26: 811-816.
- Gandhi R, Takahashi M, Virtanen C, Syed K, Davey JR, Mahomed NN. Microarray analysis of the infrapatellar fat pad in knee osteoarthritis: relationship with joint inflammation. Journal of Rheumatology: 2011 Sep; 38(9): 1966-1972.
- Gandhi R, Smith H, Lefaivre K, RJ Davey, Mahomed NN. Complications Following Minimally Invasive Total Knee Replacment As Compared To Traditional Incision Techniques: A Meta-Analysis. The Journal Of Bone & Joint Surgery: BR 2011; 93-B: 588.
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- Gandhi R, Takahashi M, Smith H, Rizek R, Mohamed N. The Synovial Fluid Adiponectin - Leptin Ratio Predicts Pain With Knee Osteoarthritiis. The Journal Of Bone & Joint Surgery: BR 2011; 93-B 559.
- Gandhi R, Rampersaud YR, Mahomed NN, Hudak P, Veillette C, Syed K, Lewis S, Davey RJ. Patient Concerns About Undergoing Elective Muscoskeletal Surgery. The Journal Of Bone & Joint Surgery: BR 2011; 93-B: 561.
- Kidane C, Gandhi R, Sarro A, Valiante TA, Harvey BJ, Rampersaud YR. Is referral to a spine surgeon a double edged sword?: Patient concerns before consultation. Canadian Family Physician: 2011; 57(7): 803-810.



- Kim S, Mortaz Hedjri S, Coyte PC, Rampersaud YR. Cost-utility of lumbar decompression with or without fusion for patients with symptomatic degenerative lumbar spondylolisthesis. Spine: 2012 Jan; 12(1):44-54.
- Las Heras F, DaCosta FS, Pritzker PH, Haroon N, Netchev G, Tsui HW, Chiu B, Erwin WM, Tsui FWL, and Inman RD. Aberrant axial mineralization precedes spinal ankylosis: A molecular imaging study in ank/ank mice. Arthritis Research and Therapy: 2011 Oct;13(5):R163.
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- Lau JTC, Henderson BW, Yee G. Surgical Correction of Bunionette Deformity. In: Operative Techniques in Orthopaedic Surgery (Wiesel S., ed). Lippinocott Williams & Wilkins, Philadelphia 2011: 3730-3735.
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- Mahomed NN, Smith H, Gandhi R. Advanced Concepts in Clinical Research. Meta-Analysis Reporting Checklists. Bhandari: Chapter 30: 202-208. Elsevier Inc 2012.
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- Perruccio A, Power DJ, Evans H, Mahomed S, Gandhi R, Mahomed N, Davis A. Multiple joint involvement in total knee replacement for osteoarthritis - Effects on patient-reported outcomes. Arthritis Care and Research (Hoboken): 2012; 64(6):838-846.
- Rampersaud YR, Wai EK, Fisher CG, Yee AJM, Dvorak MFS, Finkelstein JA, Gandhi R, Abraham EP, Lewis SJ, Alexander DI, Oxner WM, Davey JR, Mahomed NN. Postoperative Improvement in Health-Related Quality of Life: A National Comparison of Surgical Treatment for Focal (One- to Two-Level) Lumbar Spinal Stenosis Compared with Total Joint Arthroplasty for Osteoarthritis. The Spine Journal: 2011; 11: 1033-1041.
- Schemitsch, LA, Schemitsch, EH, Veillette, CJH, Zdero, R, McKee, M. Function plateaus after one year in patients with surgically treated midshaft clavicle fractures. Clinical Orthopaedics and Related Research: 2011; 469(12): 3351-3355.
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- Smith HN, Jan M, Mahomed NN, Davey JR, Gandhi R. Meta-Analysis and Systematic Review of Clinical Outcomes Comparing Mobile Bearing and Fixed Bearing Total Knee Arthroplasty. Journal of Arthroplasty: 2011; 26(8): 1205-1213.
- Standaert C, Friedly J, Rechtine G, Erwin WM, Lee M, Hennrickson N and Norvell DC. Comparative Effectiveness of Exercise, Acupuncture and Spinal Manipulation for Low Back Pain. Spine: 2011 Oct; 36(21):S120-130.
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- Wilson RK, Tomlinson G, Stas V, Ridout R, Mahomed NN, Gross A, Cheung AM. Male and Non-English-Speaking Patients with Fracture Have Poorer Knowledge of Osteoporosis. Journal of Bone and Joint Surgery: 2011; 93: 766-774.
- Wright JG, Hawker G, Hudak P, Croxford R, Glazier RH, Mahomed NN, Kreder HJ, Coyte P. Variability in Physician Opinions About the Indications for Knee Arthroplasty. Journal of Arthroplasty: 2011; 26: 569 - 575.



#### **INVITED VISITS**

Davey JR: Canadian Orthopaedic Association Annual Meeting, St. John's, Newfoundland and Labrador, Canada, 9 July 2011. Invited Lecturer: Instructional course lecture; the direct lateral approach to the hip.

Davey JR: Atlantic Provinces Orthopaedic Association, Halifax, Nova Scotia, Canada, September 2011. Visiting Professor: Infected total joint arthroplasty. Revision total hip arthroplasty.

Davey JR: Arcos Revision Total Hip Training Course, Miami Anatomical Research Center, Miami, Florida, United States, 2 October 2011. Cadaver Training Course: Arcos offset comparisons. Arcos case studies. Arcos cadaveric demonstration.

Davey JR: South Florida Learning Center, Fort Lauderdale, Florida, United States, 18 November 2011. Co-Chair: Surgical advances in revision hip and knee. Acetabular augments: when, why, wear. Total stabilized design rationale. Total stabilized surgical video.

Davey JR: Henderson, Nevada, United States, 2 December 2011. Cadaver Training Course: Arcos offset comparisons. Arcos case studies. Arcos cadaveric demonstration.

Erwin WM: North American Spine Society Annual Meeting, Chicago, Illinois, November 2011. (1) Guest Speaker: "Intervertebral Disc-Derived Stem Cells: Implications for Regenerative Medicine and Neural Repair". (2) Faculty/Presenter: "Efficacy of cell-based therapeutics for degenerative disc disease".

Erwin WM: Cervical Spine Research Society 39th Annual Meeting, Phoenix, Arizona, 2011. "Intervertebral Disc-Derived Stem Cells: Implications for Regenerative Medicine and Neural Repair".

Gandhi R: Canadian Orthopedic Association, St. John's, July 2011: (1) A Prospective Study of Asymptomatic Pulmonary Embolism after Hip and Knee Arthroplasty. (2) Advanced Age, Obesity and Continuous Catheter Femoral Nerve Blockade are Independent Risk Factors for Post-operative Falls Following Primary Total Knee Replacement. (3) Evaluating a Case Series. Instruction Course Lecture: Evidence Based Orthopedics. (4) Meta-analysis and Systematic Review of Clinical Outcomes Comparing Mobile-bearing and Fixed-bearing Total Knee Arthroplasty. (5) Obesity and Knee arthroplasty. Instruction Course Lecture: Evidence Based Orthopedics. (6) Predictors of Complications and Re-operation after Knee Cruciate Ligament Reconstruction in Ontario 1992-2008. (7) Prevalence of Patients with No Clinically Significant Improvement Following Total Knee Replacement. (8) Preventing Infection in Hip Arthroplasty. Instruction Course Lecture. (9) The Influence of Patient, Provider and Surgical Factors on Revision Anterior Cruciate Ligament Reconstruction (ACLR) in Ontario.

Gandhi R: American Orthopedic Society for Sports Medicine, San Diego, California, July 2011: Predictors of Complications and Re-operation after Knee Cruciate Ligament Reconstruction in Ontario 1992-2008.

Gandhi R: International Conference on Health, Wellness and Society, Chicago, Illinois, United States, March 2012: Determinants of the likelihood of returning to work in a chronic pain population. Podium Presentation.

Gandhi R: American Occupational Health Conference, Los Angeles, South Carolina, United States, 2012: Podium: Determinants of the likelihood of returning to work in a chronic pain population.

Lewis S: Ganga Hospital, Coimbatore, India, 1 July 2011. (1) Invited Lecturer: Ganga Operative Spine Course 2011 Live Surgery. Revision Scoliosis Surgery: Planning and Execution. (2) Visiting Professor: Live Surgery: Operation Session.

Lewis S: Scoliosis Research Society IMAST 18th International Meeting, Copenhagen, Denmark, 13-16 July 2011: (1) Advanced Spine Techniques. (2) Presenter: Use of a Central Compression Rod to Reduce Thoracic Level Spinal Osteotomies. (3) Presenter: Results and Complications of Posterior-Only Reduction and Fusion for High-Grade Sponydylolisthesis. (4) Presenter: Comparison of Current Trends in the Treatment of Neuromuscular Scoliosis: Results from the Canadian Pediatric Spinal Deformities Study Group. (5) Presenter: Use of a Central Compression rod to Reduce Thoracic Level Spinal Osteotomies.

Lewis S: Medtronic, Frankfurt, Germany, 1 September 2011. Invited Distinguished Faculty: (1) Challenges in the Treatment of Spinal Deformity in the Aging Population: co-morbidities and complications. (2) Reduction objectives and Type of release.

Lewis S: Scoliosis Research Society 46th Annual Meeting, Louisville, Kentucky, United States, 14 September 2011. Presenter: Early Results and Complications of Posterior-Based Osteotomies in Patients with Previous Spinal Fusion Abstract.



Lewis S: Medtronic, Memphis, Tennessee, United States, 3-4 October 2011. Chair: (1) Spondylolisthesis Advances in Spine Pediatric Deformity Course. (2) Intra-Operative Traction. Presenter: Stephen Lewis. Advances in Spine Pediatric Deformity Course. (3) Neuromonitoring in Deformity Corrections. Presenter: Stephen Lewis. Advances in Spine Pediatric Deformity Course. (4) Video Osteotomies. Presenter: Stephen Lewis. Advances in Spine Pediatric Deformity Course.

Lewis S: North American Spine Society 26th Annual Meeting, Chicago, Illinois, United States, 2 November 2011. Presenter: Early Results and Complications of Posterior Based Osteotomies in Patients with Previous Spinal Fusion Abstract.

Lewis S: Stryker, Las Vegas, Nevada, United States, 5 November 2011. Speaker: Spondy Technique: Nerve Secompression, Partial Decompression, and TLIF Technique Current Controversies in Deformity Surgery.

Lewis S: Dallas, Texas, United States, 10 November 2011. Presenter: Spine Deformity Study Group Meeting.

Lewis S: Stryker, Gent, Belgium, 17-18 November 2011. (1) Chair: Principles of Deformity Correction Key Note Lecture. (2) Invited Lecturer: Osteotomies in Spinal Deformity Panel Case Discussion. (3) Chair: Controversies in Spondylolisthesis Stryker Solutions for Spinal Deformity. (4) Chair: Principles of Sagittal Alignment Stryker Solutions for Spinal Deformity. (5) Chair: Host Chairman & Chairmen closing remarks Stryker Solutions for Spinal Deformity. [6] Chair: Host Chairman & Chairmen closing remarks Stryker Solutions for Spinal Deformity.

Lewis S: AO Spine - Davos Courses - Switzerland 2011, Davos, Switzerland, 15 December 2011. Invited Lecturer: (1) AOSpine Masters Knowledge Forum. Complex Cases # 5, Expert opinion; Complex Case #6. (2) AOSpine Masters Knowledge Forum. Complex Cases #8, Case solution. (3) AOSpine Masters Knowledge Forum Complex Cases # 2, AIS-70 deg TX and 30 deg Lx, Lenke 1B or 1C. Key Discussion Aspects: Flexibility assessment and need for releases; Fusion level selection, fusion of 1 or both curves; Operative approach-Anterior vs posterior; Instrumentation strategy, correction techniques and implant materials; Treatment options; Case solution.

Lewis S: Rabin Medical Center, Campus Beilinson, Israel, Petah Tikva, Israel, 25 December 2011. Visiting Professor: Management and Evaluation of Patients with Sagittal and Coronal Imbalance of the Spine. Presenter: Stephen Lewis. Grand Rounds.

Lewis S: Department of Pediatric Orthopaedics, Dana Children's Hospital, Tel Aviv - Yaffo, Israel, 27 December 2011. Visiting Professor: Comples Pediatric S pinal Deformities with and without Osteotomies. Grand Round Lecture.

Lewis S: BoadWater, Beaver Creek, Colorado, United States, 14-16 January 2012. (1) Panel: The Surgical Management of Spinal Disorders, Dr. Tom Lowe Spine Symposium Session 2: Adult Deformity I. (2) Panel: The Surgical Management of Spinal Disorders, Dr. Tom Lowe Spine Symposium Session 3: MIS TECHNIQUES. (3) Lecturer: The Surgical Management of Spinal Disorders, Dr. Tom Lowe Spine Symposium When to stop at L5 vs. the sacrum. If you got ot the sacrum, what are the options? What kind of interbody should be considered at L5-S1 - TLIF vs. ALIF vs. AxiaALIF vs. no LIF? What is the good, bad and ugly of iliac fixation? (4) Panel: The Surgical Management of Spinal Disorders, Dr. Tom Lowe Spine Symposium Session #4: Aging Spine. (5) Panel: The Surgical Management of Spinal Disorders, Dr. Tom Lowe Spine Symposium Session 7: Adult Deformity II.

Lewis S: Canadian Orthopaedic Resident Review in Reconstructive Surgery (CORR-Recon), Mississauga, Ontario, Canada, 21 January 2012. Lecturer: Adult Spinal Deformity.

Lewis S: Baxter National Sales Meeting, Toronto, Ontario, Canada, 16 February 2012. Surgeon Speaker: Managing Blood Loss in Complex Spine Surgery.

Lewis S: Canadian Spine Society, Sun Peaks, British Columbia, Canada, 1-2 March 2012. Presenter: (1) High UIV (Upper Instruemented Vertebra) sagittal angle is associated with UIV fracture in adult deformity corrections. (2) Current Trends in the Surgical Treatment of Adolescent Idiopathic Scoliosis in Canada. (3) Correction of Adult Idiopathic Scoliosis Using Intra-operative Skeltal Traction. (4) Result and complications of posterior-only reduction and fusion for high-grade spondylolisthesis.

Lewis S: BoadWater, Park City, Utah, United States, 2 March 2012. Faculty Invited Speaker: Case Discussions: Kyphosis Complications Complication in Pediatric Spinal Deformity Case 4: PJK

Lewis S: Stryker, San Diego, California, United States, 23 March 2012. Presenter: (1) Spring Deformity Symposium Sagittal Plane, Lumbopelvic Goals and Osteotomies (PSO Kit). (2) Spring Deformity Symposium Lunch and Case Studies.



Lewis S: Synthes, Halifax, Nova Scotia, Canada, 28 April 2012. Presenter: Deformity Correction Session IV - Deformity Correction. Cases: Traction, Direct Vertebral Rotation, Ponte Osteotomies, Pedicle Subtraction Osteotomies.

Mahomed NN: BC Orthopaedic Association - UBC Department of Orthopaedics, Vancouver, British Columbia, Canada, 3-4 May 2012. Invited Lecturer: (1) Health Care Challenges for Orthopaedics in this Decade Symposium: Sustainable Health Care. (2) Osteoarthritis: A New Way to Look at an Old Problem.

Marshall KW: Canadian Academy of Sports Medicine, St. John's, Canada, July 2011. Invited Speaker: The Science of Viscosupplementation: The Significance of Molecular Weight.

Marshall KW: Sanofi Aventis Canada Inc., Barrie, Ontario, Canada, 29 May 2012. Invited Speaker: Viscosupplementation: Basic Science Rationale & Clinical Application.

Rampersaud YR: 2011 Annual Meeting of the Society for Minimally Invasive Spine Surgery, Las Vegas, Nevada, United States, 22 October 2011. Invited Lecturer: Techniques of Pecutaneous Pedicle Screw Fixation, Learning Curve and Radiation Exposure.

Rampersaud YR: 26th Annual Meeting of the North American Spine Society, Chicago, Illinois, United States, 2 November 2011. Presenter: Cost-effectiveness Analysis of a Reduction in Diagnostic Imaging in Degen Spinal Disorders.

Rampersaud YR: Annual Canadian Spine Society Meeting, Sun Peaks, British Columbia, Canada, 1-3 March 2012. Invited Speaker: (1) Looking Beyond the Clinical Box: The Health Services Impact of Surgical Adverse Events. (2) MIS Lumbar Fusion for Low-Grade Isthmic and Degenerative Spondylolisthesis: 2-5 year Follow-up. (3) No Sustained Benefit of Continuous Epidural Analgesia for Minimally Invasive Lumbar Fusion: A. (4) Cost-Utility of Lumbar Decompression with or without Fusion for Patients with Symptomatic. (5) En-bloc Resection of Primary Spinal and Paraspinal Tumours with Critical Vascular Involvement.

Rampersaud YR: Division of Orthopaedic Residency Research Day, Ottawa, Ontario, Canada, 26 April 2012. Visiting Professor: (1) Comperative Effectivness of Spinal Stenosis Surgery. (2) Adverse Event in Orthopaedic Surgery.

Rampersaud YR: 9th Annual Spine Technology and Education Group Organization Symposium, Carlsbad, California, United States, 21 June 2012. Invited Speaker: (1) State of Spine Surgery: A Think Tank Minimally Invasive Surgery - Comparative effectivness or posterior minimally invasive surgery vs. traditional procedures. (2) State of Spine Surgery: A Think Tank Value - Does spinal surgery provide value?

Rampersaud YR: CAPM&R 60th Annual Scientific Meeting, Toronto, Ontario, Canada, 23 June 2012. Invited Speaker: Back and diagnostics - Practical understanding of diagnostic studies and clinical practice.

Syed K: Canadian Orthopedic Association, St. John's, 7-9 July 2011: (1) A Prospective Study of Asymptomatic Pulmonary Embolism after Hip and Knee Arthroplasty. (2) The effect of benchmodel training on cognitive learning in the operating room.

Veillette C: 2011 Semantic Technology Conference - Semantic Web, San Francisco, California, United States, 9 July 2011: Implementing GoodRelations and eCl@ss Ontologies for a Medical Device Reference Application.

Veillette C: American Academy of Orthopaedic Surgery - Electronic Skills Pavillion, San Francisco, California, United States, 10 February 2012: (1) Managing Your Internet Reputation for Orthopaedic Surgeons. (2) Search Engine Marketing for Orthopaedic Surgeons.

Veillette C: Association of Bone and Joint Surgeons, Charleston, South Carolina, United States, 5 May 2012: Wiki publishing and collaborative knowledgebase development in orthopaedics. Invited Lectures and Presentations

#### RESEARCH AND INVESTIGATIONS

Can ultrasound predic nerve injury following posterior tibial nerve block in diabetic patients with peripheral neuropathy? Riazi S, Syed K, Brull R, Chan V, Bril V, Beheiry H, Lau J: American Society of Regional Anesthesia and Pain Medicine. (\$33,696 USD 2010 - 2012).

Centre of Research Expertise in Improved Disability Outcomes (CREIDO). Cassidy ID, Cote P. Carette S, Mahomed NN, Hamer H, von Schroeder H, Inman R, Gignac M, Evans M, Bombardier C, Ammendolia C, Franche RL, Cole D, Reardon D, Guzman, Flannery J, Davis A, Andersen J, Loisel P, Wells R: Workplace Safety and Insurance Board (WSIB), Institute of Health Services and Policy Research (HSPR). (\$400,000 2008 - 2012).



Characterizing the 5-year natural history following total joint replacement for osteoarthritis-Assessing the links with later revision surgery and poorer patient-reported outcomes. Perruccio A, Gandhi R, Davis A, Badley E, Mahomed N: Canadian Arthritis Network. (\$50,000 2012 - 2014).

Development of a collaborative orthopaedic knowledgebase using wiki technologies - Orthopaedia. com. Veillette CJH, Bernstein J: Association of Bone and Joint Surgeons. (\$240,000 2011 - 2012).

Fixation using alternative Implants for the treatment of hip fractures: A Multi-center Randomized Trial Comparing Sliding Hip Screws and Cancellous Screws on Revision Surgery Rates and Quality of Life in the Treatment of Femoral Neck Fractures. Bhandari M, Syed K, Schemitsch E, Tornetta P, Tetsworth K: Canadian Institutes of Health Research (CIHR). (\$80,000 2009 - 2011).

Minimal Access Ambulatory Spine Surgery Research and Education Program. Rampersaud Y: Toronto General and Western Foudation. (\$1,000,000 2007 - 2012).

Regenerative Approach to Intervertebral Disc Disease. Erwin WM: Skoll Foundation. (\$628,000 USD 2010 - 2013).

Open and arthroscopic stabilization for anterior shoulder instability in Ontario. Ogilvie-Harris D, Wasserstein D, Dwyer T, Mahomed N, Gandhi R, Veillette CJ: Division of Orthopaedics - University Health Network. (\$25,000 2011 - 2012).

# **HONOURS RECEIVED**

Gandhi R: Abstract Award, American Society of Regional Anaesthesia and Pain Medicine. 2012.

Rampersaud YR: Outstanding Paper Award, North American Spine Society and The Spine Journal. November 2011.

Veillette C: Award of Merit, Canadian Orthopaedic Association. In recognition of leadership and innovation in orthopaedic informatics, technology, and communications. 2012.

# Division of Plastic and Reconstructive Surgery

Dr. D. Anastakis Professor

Dr. P. Bray **Assistant Professor** Dr. B. Graham **Assistant Professor** 

Dr. S. Hofer Associate Professor (Division Head)

Dr. C. Novak Associate Professor Dr. H.P. von Schroeder Associate Professor Assistant Professor Dr. T. Zhong

#### **PUBLICATIONS**

Ahmad J, Alrasheed T, Zhong T, Hofer SOP. Delayed Breast Reconstruction Using the Inverted Latissimus Dorsi Musculocutaneous Flap: A Novel Approach to Create Ptosis and Projection - Tips and Pearls. Canadian Journal of Plastic Surgery: 2012; 20(1):47-50.

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### **INVITED VISITS**

Anastakis DJ: Ontario Ministry of Health and Long Term Care, Toronto, Ontario, 23 April 2012. Keynote presentation: The art of influence. Interactive presentation about creative communication and the art of influence.

Anastakis, Dimitrios John: Canadian Society of Hand Therapists, Toronto, Ontario, 4 May 2012. Invited Speaker: Cortical plasticity following upper extremity injury, reconstruction and rehabilitation.

Anastakis, Dimitrios John: Canadian Association of Allied Health Programs, St. John's, Newfoundland and Labrador, 25 May 2012. (1) Panel Moderator: Simulation: A Spectrum of Development, Integration and Experience. (2) Invited Speaker: Simulation in Health Professions Education.

Anastakis, Dimitrios John: Canadian Society of Plastic Surgeons, Toronto, Ontario, 7 June 2012. Invited Speaker: Simulation in plastic surgery education.

Hofer, Stefan: Faculty of 2011 Chang Gung / Mayo Clinic Symposium in Reconstructive Surgery, Taipei, Taiwan, Province Of China, 29 October 2011. (1) Moderator: Breast I: Panel 6 - Breast Reconstruction Panel. (2) Invited Lecturer: Microsurgery 101: Making microsurgery simple and successful. (3) Invited Lecturer: Improving delayed breast reconstruction with a modified latissimus dorsi flap technique.

Hofer S: American Society for Reconstructive Microsurgery, Las Vegas, Nevada, United States, 14 January 2012. Invited Speaker: (1) Face Reconstruction Panel: Masters in Microsurgery. (2) Maximizing Aesthetics in Reconstructive Breast Surgery Breakout Panel.

Hofer S: University of Basil, Switzerland, 23 February 2012. Visiting Professor: New Concepts in Head and Neck Reconstruction.

Hofer S: Course Faculty of 4th MAYO Clinic/ Chang Gung Symposium in Reconstructive Surgery, Rochester, Minnesota, United States, 31 May 2012. (1) Moderator: Session XII Education and Innervation and Animation. (2) Invited Lecturer: Session VII-B Lower Extremity (Concurrent Session): Outcomes in Extremity Reconstruction Following Multimodality Sarcoma Treatment. (3) Invited Lecturer: Session XI Craniofacial and Head & Neck: Principles of Nasal Reconstruction with the 3-Stage Paramedian Forehead Flap-Lining, Structural Support and Cover.

Novak CB: American Society for Surgery of the Hand, 66th Annual Meeting, Nevada, 7-8 September 2011. Presenter: (1) Factors Associated with Cold Sensitivity after Brachial Plexus Nerve Injury. (2) Rehabilitation Strategies Following Nerve Transfer. (3) Nerve Injury Case: Presentations & Discussion. (4) Reconstruction Following Traumatic Nerve Injury - A Changing Paradigm. (5) Reconstruction Using Distal Sensory & Motor Nerve Transfers. (6) Achieving Optimal Outcome through Hand Therapy.

Novak CB: Multi-Disciplinary Nerve Seminar, Rockyview Hospital, Calgary, Alberta, 17 November 2011. Rehabilitation Following Nerve Transfers.

Novak CB: American Association for Hand Surgery, Annual Meeting, Las Vegas, Nevada, United States, 12 January 2012. Cold Intolerance After Median, Ulnar or Radial Nerve Injury.

Novak CB: 2012 Electives in Hand Surgery, American Society for Surgery of the Hand & American Society of Hand Therapists, New Orleans, Louisiana, 25 February 2012. (1) Nerve Injury and Healing. (2) Therapeutic Management Following Nerve Transfer.

Novak CB: IX International Congress of Surgery and Therapy of the Hand, VIII Mission Guatemala Healing Hands Foundation, Guatemala City, Guatemala, 9 March 2012. Invited Speaker: Therapist's Perspective: Pediatric Upper Extremity Nerve Injuries.

Novak CB: Department of Physiotherapy, Universidad Mariano Galvez de Guatemala, Guatemala City, Guatemala, 12 March 2012. Invited Speaker: Nerve Injuries: Radial, Median & Ulnar Nerves Upper Arm, Forearm & Hand.

Novak CB: Canadian Society of Hand Therapists, Toronto, Ontario, Canada, 4 May 2012. Invited Speaker: Function and Cortical Plasticity.



Novak CB: MANUS & Canadian Society of Hand Therapists, Annual Meeting, Toronto, Ontario, Canada, 5 May 2012. Presenter: Cold Intolerance After Median, Ulnar or Radial Nerve Injury.

Novak CB: CIHR Institute of Musculoskeletal Health and Arthritis, King City, Ontario, Canada, 11 June 2012. Biomedical & Psychosocial Factors Associated with Disability Following Upper Extremity Nerve Injury.

von Schroeder HP: AO Hand and Wrist Fracture Management Workshop, Toronto, Ontario, Canada, 5 May 2012. Invited Speaker: (1) Metacarpal fractures: indications for conservative versus surgical treatment. (2) Metacarpal fractures: exposures and techniques for fixation. (3) Scaphoid fractures: why worry

von Schroeder HP: Canadian Orthopaedic Society Annual Meeting, Ottawa, Ontario, Canada, 18 June 2012. Invited Lecturer: Carpal Instability Instructional Course.

Zhong T: Canadian Society of Plastic Surgeons (CSPS) 66th Annual Meeting June 5-9, 2012, Toronto, Ontario, Canada, 7-8 June 2012. Presenter: (1) Tips and Pearls: When, How, and Why Perform a Bipedicled Free DIEP Flap for Breast Reconstruction. (2) A Comparison of Cancer-Specific Distress Changes Between Immediate and Delayed Breast Reconstruction Following Free DIEP or MS-TRAM Flap Reconstruction. (3) Predictors of Complications After Breast Reconstruction in Patients with Macromastia. (4) Functional Outcome After Flap Reconstruction Following Upper Limb Soft Tissue Sarcoma Resection. (5) Self-Efficacy is a Determinant of Post-Decision Regret Following Delayed Postmastectomy Breast Reconstruction.

### RESEARCH AND INVESTIGATIONS

Belinda Stronach Chair in Breast Reconstruction Surgery. Hofer SOP: Endowed Donation. (\$1,300,000 2008 - present).

Defining the Structural Integrity of Decellularized Tracheal Allografts. Hofer SOP, Waddell T, Haykal S: Physicians Services Incorporated Foundation (The) (PSI). (\$150,000 2011 - 2012).

Determining the Immunogenicity of Decellularized Tracheal Allograft. Hofer SOP, Waddell T. Haykal S: Physicians Services Incorporated Foundation (The) (PSI), Resident Research Grant. (\$9,990 2011 - 2012).

Eaton Family Donation. Hofer SOP: Endowed Donation. (\$1,080,000 2010 - present).

Hawke Family (BRA) Fund. Hofer SOP: Annual BRA Fundraising Event. (\$120,000 2010 - present).

Hypoxic postconditioning of human skeletal muscle against reoxygenation injury: efficacy, mechanism and therapeutic potentials. Pang C, Forrest C, Hofer S, Zhong T: Canadian Institutes of Health Research (CIHR). (\$326,763 2009 - 2012).

The Use of Acellular Dermal Matrix in One-Stage Implant Breast Reconstruction: A Multicenter, Randomized Controlled Trial. Zhong T, Baxter N: Conquer Cancer Foundation and the American Society of Clinical Oncology, 2012 Career Development Award. (\$200,000 USD 2012 - 2015).

The use of transversus abdominis plane (TAP) block in autologous breast reconstruction donor site: A randomized, double-blind, placebo-controlled trial. Zhong T, Srinivas C, McCluskey S, Hofer SOP: Educational Foundation/Canadian Society of Plastic Surgeons (The), Outcome/Clinical Study Research Grant. (\$10,000 2011 - 2012).

The use of transversus abdominis plane (TAP) block in autologous breast reconstruction donor site: A randomized, double-blind, placebo-controlled trial. Zhong T, Srinivas C, McCluskey S, Hofer SOP: Plastic Surgery Educational Foundation/American Society for Reconstructive Microsurgery, Combined Pilot Research Grant. (\$10,000 USD 2011 - 2012).

Utilization of Breast Reconstruction in the Treatment of the Breast Cancer in Ontario: A Population-Based Study. Zhong T, Urbach D, Baxter N, Musgrave M, Hofer SOP, Sutradhar R: Canadian Breast Cancer Foundation (CBCF), Ontario Region. (\$257,474 2011 - 2014).



### Division of Thoracic Surgery

Dr. M. Cypel Assistant Professor

Dr. G. Darling Professor

Dr. M. de Perrot Associate Professor

Dr. S. Keshavjee Professor
Dr. M. Liu Professor
Dr. M. McKneally Professor

Dr. A. Pierre Asisstant Professor
Dr. T. Waddell Professor (Division Head)
Dr. K. Yasufuku Assistant Professor

### **PUBLICATIONS**

Aigner C, Slama A, Hötzenecker K, Urbanek B, Schmid W, Scheed A, Lang G, Keshavjee S, Klepetko W. Clinical Ex Vivo Lung Perfusion-Pushing the Limits. J Heart Lung Transplant: 2011 Apr; 30(4S): S88.

Allibhai Z, Cho BC, Taremi M, Atallah S, Hope A, Hwang D, Keshavjee S, Tsao M, Yasufuku K, Kim SW, Bezjak A. Surgical salvage following stereotactic body radiotherapy for early-stage NSCLC. Eur Respir J: 2012 Apr; 39(4):1039-1042.

Anayama T, Nakajima T, Waddell TK, Keshavjee S, Yasufuku K. A novel minimally invasive technique for localization of pulmonary nodules using a near-infrared fluorescence thoracoscope. Am J Respir Crit Care Med: 2012; 185: A5830.

Anayama T, Nakajima T, Chan H, Daley M, Keshavjee S, Yasufuku K. The feasibility of endobronchial ultrasound guided transbronchial needle injection of ethanol in mediastinal lymph nodes in a porcine model: a preliminary study. Chest: 2011; 140: 479A.

Anayama T, Nakajima T, Zeitlin N, Waddell T, Keshavjee S, Yasufuku K. Establishment of a novel orthotopic peripheral lung tumor animal model suitable for imaging and thoracic interventional studies. J Thorac Oncol: 2011 June; 6 (6) Suppl: S778-779.

Anruku M, Pierre A, Nakajima T, de Perrot M, Darling G, Waddell T, Keshavjee S, Yasufuku K. Endobronchial Ultrasound-Guided Transbronchial Needle Aspiration in the Management of Previously Treated Lung Cancer. Annals of Thoracic Surgery: 2011 Jul; 92(1):251-255.

Anraku M, Darling GE, Pierre AF, Miller L, Yasufuku K, de Perrot M, Waddell TK, Singer LG, Keshavjee S. Detection of Non-Acid Gastroesophageal Reflux in post-lung Transplant Patients by Combined 24 hr Ph and Multichannel Impedance Monitoring. J Heart Lung Transplant: 2011 Apr; 30(4S): S338.

Anraku M, Mura M, Yun Z, Pierre AF, Yasufuku K, Singer LG, Waddell TK, Keshavjee S, de Perrot M. The Impact of Gene Expression Profiles in Pulmonary Fibrosis Lungs on Primary Graft Dysfunction after Lung Transplantation. J Heart Lung Transplant: 2011 Apr; 30(4S): S395.

Aramini B, Dianelo S, Lederer D, Wilt J, Shah L, Mattioli S, Keshavjee S, Floros J, Arcasoy J, Sonett J, D'Ovidio F. Donor Lung Surfactant Protein D Gene Polymorphines are associated with Bronchiolitis Obliterans Syndrome and Mortality after Lung Transplantation. J Heart Lung Transplant: 2011 Apr; 30(4S): S148.

Arcasoy SM, Berry G, Marboe CC, Tazelaar HD Zamora MR, Keshavjee S. Pathologic interpretation of Transbronchial Biopsy for Acute Rejection of Lung Allograft is Highly Variable. Am J Transplan: 2011; 11(2):320-328.

Bonato R, Machuca T.N., Cypel M, Yeung J, Saito T, Liu M, Hwang D.M., Husain S, Keshavjee S. Ex vivo Treatment of infection in Human Donor Lungs. J Heart Lung Transplant: 2012 Apr; 31(4S):S270.

Booth CM, Shepherd FA, Peng Y, Darling G, Li G, Kong W, Mackillop WJ. Adjuvant chemotherapy for non-small cell lung cancer, practice patterns and outcomes in the general population of Ontario, Canada. Journal of Thoracic Oncology: 2012 Mar; 7(3):559-566.

Coate LE, Massey C, Hope A, Sacher A, Barrett K, Pierre A, Leighl N, Brade A, de Perrot M, Waddell T, Liu G, Feld R, Burkes R, Cho BC, Darling G, Sun A, Keshavjee S, Bezjak A, Shepherd FA. Treatment of the elderly when cure is the goal: The influence of age on Treatment Selection and Efficacy for Stage III Non-small Cell Lung Cancer. J Thorac Oncol: 2011; 6(3):537-544.



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- Cypel M, Kaneda H, Yeung JC, Anraku M, Yasufuku K, Perrot MD, Pierre A, Waddell TK, Liu M, Keshavjee S. Increased levels of interleukin-1 $\beta$  and tumor necrosis factor- $\alpha$  in donor lungs rejected for transplantation. J Heart Lung Transplant: 2011 Apr; 30(4): 452-459.
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- Cypel M, Keshavjee S. The Clinical Potential of Ex vivo Lung Perfusion. Expert Rev Respir Med: Feb; 6 (1):27-35.
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- Cypel M, Pierre A, Yasufuku K, De Perrot M, Leist V, Singer L.G. Waddell TK, Keshavjee S. 5 years Experience with Lung Donation after Cardiac Death. J Heart Lung Transplant: 2012 Apr; 31(4S):S325.
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- Cypel M, Yeung JC, Keshavjee S. Novel Approaches to Expanding the Lung Donor Pool: Donation after Cardiac Death and Ex Vivo Conditioning. Clin Chest Med.: 2011; 32(2): 233-244.
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Yasufuku K, Nakajima T, Fujiwara T, Yoshino I, Keshavjee S. Utility of endobronchial ultrasound-guided transbronchial needle aspiration in the diagnosis of mediastinal masses of unknown etiology. Ann Thor Surg: 2011; 91(3):831-836.

Yasufuku K, Pierre A, Darling G, de Perrot M, Waddell T, Johnston M, da Cunha Santos G, Geddie W, Boerner S, Le LW, Keshavjee S. A prospective controlled trial of endobronchial ultrasound-guided transbronchial needle aspiration compared with mediastinoscopy for mediastinal lymph node staging of lung cancer. Thorac Cardiovasc Surg: 2011 Dec; 142(6): 1393-

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Yeung JC, Boutros PC, Zamel R, Cypel M, Bai X.H, Matsuda Y, Waddell TK, Liu M, Keshavjee S. Time-Course Microarray Analysis of Rejected Human Donor Lungs during 12 hours of Acellular Normothermic Ex-Vivo Lung Perfusion. J Heart Lung Transplant: 2012 Apr; 31(4S):S296.

Yeung JC, Cypel M, Machuca T, Koike T, Cook D.J. Bonato R, Chen M, Sato M, Waddell TK, Liu M. A.S.Slutsky, S, Keshavjee. Ex vivo Evalution of Brain Dead Donor Lungs: P02 Is not enough. J Heart Lung Transplant: 2012 Apr; 31(4S):S634.

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### **INVITED VISITS**

Keshavjee S: Surgical Grand Rounds, University of Virginia, Charlottesville, Virginia, 10 August 2011. Invited Lecturer: Can we engineer 'super organs' for transplantation?

Keshavjee S: Gift of Life Michigan Health & Hospital Association Keystone: Gift of Life Webinar, Toronto, Ontario, Canada, 7 September 2011. Invited Speaker: (1) Lung Recruitment Strategies and Ex vivo lung Reconditioning: Improving lungs for transplantation. (2) Ex-vivo Lung Reconditioning: A Breath of Fresh Air.

Keshavjee S: Trillium Gift of Life Network, Board of Directors Retreat, Toronto, Ontario, 12 September 2011: Can we Engineer "super organs" for Transplantation.



Keshavjee S: Royal College of Physicians and Surgeons of Canada, University of Montreal, Montreal, Quebec, 19-21 October 2011. Invited Professor: (1) Department of Surgery Grand Rounds: Donor management and lung preservation: From topical cooling to ex-vivo lung perfusion. (2) Multi-organ Transplant Program Conference: Ex-vivo perfusion in transplantation: A novel frontier in solid organ preservation.

Keshavjee S: Critical Care Canada Forum, Toronto Ontario, Canada, 14 November 2011. Invited Speaker: (1) ECLS as a bridge to lung transplant (2) ECLS Case Presentations.

Keshavjee S: 3rd Joint Cancer Research Symposium, Shanghai, China, 24 November 2011. Invited Lecturer: Can we engineer super organs for transplantation?

Keshavjee S: University of British Columbia, Vancouver, British Columbia, Canada, 5 December 2011. Invited Lecturer: Can we engineer 'super organs' for transplantation?

Keshavjee S: Division of Thoracic Surgery, Department of Surgery, Vancouver General Hospital, Vancouver, British Columbia, Canada, 6 December 2011. Invited Lecturer: Innovations in the surgical management of lung cancer.

Keshavjee S: Department of Anaesthesia Grand Rounds, Vancouver General Hospital, Vancouver, British Columbia, Canada, 7 December 2011. Invited Lecturer: Future Directions in Lung Transplantation.

Keshavjee S: General Thoracic Surgical Club Annual Meeting, San Diego, California, United States, 9 March 2012. Invited Speaker: Ex vivo lung perfusion.

Keshavjee S: American Association for Thoracic Surgery, San Francisco, California, United States, 28 April 2012. Invited Speaker: (1) ECMO: Update on Technology and Protocols. (2) Lung Transplantation: Where we are and Where We are going.

Keshavjee S: Pneuomocon 2012, New Dehli, India, 6 May 2012. Invited Speaker: State of the Art in Lung Transplant Web-Seminar.

Keshavjee S: Emory University School of Medicine, Atlanta, Georgia, United States, 25 May 2012. Invited Lecturer: Ex vivo Repair and Regeneration of Organs for Transplantation.

Keshaviee S: 2nd National Congress of the Spanish Society of Transplantation, Madrid, Spain, 25 June 2012. Invited Lecturer: Engineering lungs for transplant: the potential benefits of ex vivo therapy.

Keshavjee S: Thoracic Surgery Grand Rounds, Clinica Puerta de Hierro, Madrid, Spain, 26 June 2012. Visiting Professor: Extracorporeal Lung Support: State of the Art and Setting up a Clinical

Liu M: The Fifth Multi-Disciplinary Symposium of Ontario Chinese Professors, Huntsville, Ontario, Canada, 1 July 2011. Keynote Speaker: Lung transplantation and life transformation.

Waddell TK: Shanghai Jiao Tong University School of Medicine, China, 23 November 2011. Invited Speaker: Regenerative Medicine for Lung and Airway Diseases. 3rd Joint Symposium on Translational Cancer Research.

Waddell TK: Waterloo Wellington Regional Cancer Program (Cancer Care Ontario), Waterloo, Ontario, Canada, 26 March 2012. Invited Speaker: Current Assessment and Surgical Management of Lung Cancer: The Impact of Rapid Response Programs.

Yasufuku K: 14th World Conference on Lung Cancer, Amsterdam, Netherlands, 4-5 July 2011. (1) Invited Speaker: Educational Session, Imaging Aspects of Staging in Lung Cancer. EBUS and EUS for N-staging in NSCLC. (2) Invited Speaker: Pro-Con debate, Endoscopic Highlights. TBNA is the issue, not EBUS guided. (3) Session Chair: Nodal Staging by Ultrasound Endoscopy and Alternate Image Guided Diagnosis.

Yasufuku K: Division of Thoracic Surgery, InCor Heart Institute of the Hospital das Clinicas, University of Sao Paulo Medical School, Sao Paulo, Brazil, 20 September 2011. Visiting Professor: (1) Bronchoscopic Approach to the Peripheral Nodules - Tracheal Surgery Rounds. (2) Interventional Thoracic Surgery Suite of the Future - Respiratory Endoscopy/Thoracic Surgery Rounds. (3) Interventional Pulmonology - Pulmonology/Thoracic Surgery/Radiology Rounds. (4) Toronto Experience in Lung Transplantation - Transplant Round.

Yasufuku K: The American College of Chest Physicians International Conference 2011, Honolulu, Hawaii, United States, 22-25 October 2011. Invited Speaker: (1) Post Graduate Course, The 19th Annual Assembly of the American Association of Bronchology and Interventional Pulmonology. Surgical approach to the pulmonary nodule. (2) Panel Discussion: Bronchoscopic Sampling of Peripheral Lung Nodules. The little needle that can! Evolving role of linear endobronchial ultrasound in exploring markers and genomics of lung cancer. (3) Panel Discussion: Endobronchial Ultrasound: How to Do It, How to Learn It, How to Teach It. EBUS: How to do it - Important technical aspects and pearls from an expert.



Yasufuku K: The Queen's Medical Center, Honolulu, Hawaii, United States, 28 October 2011. Visiting Professor: EBUS-TBNA: Clinical Implications for EBUS from a Surgical Perspective.

Yasufuku K: 1st International Pulmonology Symposium, Turkish Respiratory Society, Istanbul, Turkey, 11 December 2011. Invited Speaker: (1) Meet the Professor: Endobronchial ultrasound: Its yesterday, today, tomorrow. (2) Pro/Con debate. Mediastinal staging in lung cancer: Endoscopic Ultrasound.

Yasufuku K: 4th Asia-Pacific Congress of Bronchology and Interventional Pulmonology, Jaipur, India, 20 January 2012. Invited Speaker: Endobronchial ultrasound: Modalities and specimen handling.

Yasufuku K: STS University Course. The Society for Thoracic Surgeons Annual Meeting, Fort Lauderdale, Florida, United States, 1 February 2012. Invited Speaker: Endoscopic staging and diagnosis of lung cancer - seeing beyond the airway: 1) Endobronchial ultrasound guided transbronchial needle aspiration.

Yasufuku K: The 112th Annual Congress of Japan Surgical Society, Chiba, Japan, 13 April 2012. Invited Speaker: Lung Transplantation - Strategies to improve outcome and overcome donor shortage.

Yasufuku K: American Thoracic Society International Conference 2012, San Francisco, California, United States, 19 May 2012. (1) Faculty: ATS Postgraduate Course 2012: American Thoracic Society Bronchoscopy Course - EBUS-TBNA Hands-on teaching. (2) Invited Speaker: ATS Postgraduate Course 2012: American Thoracic Society Bronchoscopy Course - Lung Cancer Staging.

Yasufuku K: The Japan Society for Respiratory Endoscopy Annual Meeting 2012, Shinjyuku, Japan, 30-31 May 2012. Invited Speaker: (1) Evolving role of EBUS for the management of patients with lung cancer. (2) Symposium. Airway foreign body.

Yasufuku K: 17th World Congress for Bronchology and Interventional Pulmonology, Cleveland, Ohio, United States, 15-17 June 2012. (1) Invited speaker and Session chair: EBUS 2012 International Symposium. EBUS-TBNA Present and Future. (2) Meet the Professor: EBUS 2012 International Symposium. EBUS-TBNA. (3) Invited speaker and Session chair: Genomic profiling of lung cancer by EBUS-TBNA - A minimally invasive approach to personalized medicine. (4) Session chair: Early lung cancer.

### RESEARCH AND INVESTIGATIONS

Acceleration Award: Towards Human Tracheal Decclularized Allografts. Waddell TK: McEwen Centre for Regenerative Medicine. (\$180,000 2010 - 2012).

Cancer Stem Cell Program. Dick J, Waddell TK: Ontario Institute for Cancer Research. (\$10,000,000 2007 - 2012).

Cell Replacement Therapy for Cystic Fibrosis, Waddell TK: Canadian Cystic Fibrosis Foundation. (\$245,000 2010 - 2012).

Determining the Immunogenicity of Decellularized Tracheal Allografts. Waddell TK: Physicians Services Incorporated Foundation (The) (PSI). (\$155,000 2011 - 2013).

Ex-vivo Gene Repair of Injured Donor Lungs for Transplantation. Keshavjee S: Wyeth Pharmaceuticals/ CIHR, Chair in Transplantation Research. (\$1,100,000 2008 - 2013).

GABAergic regulations of airway epithelium in asthma. Lu WY, Inman MD, Liu M: Canadian Institutes of Health Research (CIHR), Operating Grant. (\$675,415 2007 - 2012).

Lung Progenitor Cell Profiling in the Development of Bronchiolitis Obliterans Syndrome. Waddell TK: Roche Organ Transplant Research Foundation. (\$212,000 2011 - 2014).

Molecular Diagnostic Strategies for the Selection of Donor Lungs Transplantation. Keshavjee S: Roche Organ Transplantation Research Foundation (The) (Switzerland). (\$300,000 2009 - 2012).

Molecular Therapeutic Strategies for Ex-vivo Repair of Lungs for Transplantation. Keshavjee S: Canadian Institutes of Health Research (CIHR). (\$774,345 2009 - 2013).

NanoMed Fab: A nanofabrication centre for personalized medicine. Zheng G, Gielipy I, Liu M, Wilson B, Li R-K: Canadian Foundation of Innovation, New Initiatives Fund. (\$3,232,470 2009 - 2014).

New Emerging Team in Regenerative Medicine: Development of Lung Progenitors. Bhatia M, Waddell TK: Canadian Institutes of Health Research (CIHR). (\$2,500,000 2009 - 2015).

Project Lead, Nanotechnology-enabled image-guided interventions in vascular and lung diseases. Zhen G, Yasufuku K: Canadian Institutes of Health Research (CIHR), Emerging Team Grant. (\$2,317,262 2011 - 2015).



Research in Thoracic Intervention. Yasufuku K: Olympus Medical Systems Corp/UHN Collaboration, Research Grant. (\$250,000 2011 - 2012).

Signal cross-talk in lung injury and repair. Liu M: Canadian Institutes of Health Research (CIHR), Operating Grant. (\$713,910 2008 - 2013).

The Role of Bone Marrow Progenitors in Lung Regeneration. Waddell TK: Canadian Institutes of Health Research (CIHR). (\$685,000 2007 - 2012).

Tissue Remodelling and the Immune Response in Obliterative Bronchiolitis After Lung Transplantation. Keshavjee S: Canadian Cystic Fibrosis Foundation. (\$270,000 2009 - 2012).

Training Program in Regenerative Medicine. Levy G, Waddell TK: Canadian Institutes of Health Research (CIHR). (\$1,950,000 2009 - 2015).

Transplant Centre Incentive Grant. *Keshavjee S, Singer L: Canadian Cystic Fibrosis Foundation.* (\$54,753.00 2011 - 2013).

#### **HONOURS RECEIVED**

Keshavjee S: Distinguished Lecturer in Respiratory Sciences Award, Canadian Institutes of Health Research (CIHR), Ottawa. 2012.

**Keshavjee S:** 2nd Prize for Best paper competition, Society of Chinese Bioscientists in America. February 2012.

Keshavjee S: Zellers Senior Scientist Award, Cystic Fibrosis Canada. March 2012.

Yasufuku K: Best Referenced Paper Award, Japanese Association for Thoracic Surgery, Nagoya, Japan. July 2011.

### Division of Urology

Dr. A. Finelli Associate Professor
Dr. N. Fleshner Professor (Division Head)

Dr. M. Hassouna Professor Dr. M. Jewett Professor

Dr. G. Kulkarni Assistant Professor
Dr. A. Matthew Assistant Professor

Dr. S. Radomski Professor

Dr. M. Robinette Associate Professor

Dr. J. Trachtenberg Professor

### **PUBLICATIONS**

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Zlotta AR, Egawa S, Pushkar D, Govorov A, Kuk C, Kovylina M, Aldaoud N, Fleshner NE, Finelli A, Lockwood G, Van Der Kwast TH. Prevalence of prostate carcinoma and its precursor lesions in Russian Caucasian and Japanese men in autopsy specimens: A prospective comparative international study with central pathology review. Eur Urol Suppl: 2012 Feb; 11(1):e1122,e1122a.

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Zlotta AR, Roumeguere T, Kuk C, Alkhateeb S, Rorive S, Lemy A, van der Kwast TH, Fleshner N, Jewett MA, Finelli A, Schulman C, Lotan Y, Shariat SF, Nortier J. Select screening in a specific high-risk population of patients suggests a stage migration toward detection of non-muscle-invasive bladder cancer. European Urology: 2011; 59(6): 1026-1031.

### **INVITED VISITS**

Hassouna MM: Atlanta Georgia, United States, 20 May 2012. Presenter: Cost-effectiveness of Sacral neuromodulation in refractory overactive bladder: A Canadian Perspective.

Finelli A: Local Health Integration Networks 5/6 Cancer Care Ontario Prostate Cancer event, Mississauga, Ontario, Canada, 15 September 2011. Invited Speaker: Pre- and intraoperative strategies to diminish positive surgical margins during radical prostatectomy.

Finelli A: Northeastern Ontario Regional Cancer Centre, Grand Oncology Rounds, Sudbury, Ontario, Canada, 23 September 2011. Invited Speaker: Bone health in patients with prostate

Finelli A: Urology Meeting: Kitchener/Waterloo/Cambridge/Guelph, Cambridge, Ontario, Canada, 28 September 2011. Invited Lecturer: An update in the surgical management of kidney cancer.

Finelli A: Societe Internationale d'Urologie, Fifth Conference of the World Urologic Oncology Federation, Berlin, Germany, 15 October 2011. Invited Speaker: Small renal masses: Indications for intervention in elderly patients.

Finelli A: Candian Update in Surgical Procedures, Chicago, Illinois, United States, 10 November 2011. Invited Speaker: Partial nephrectomy is the optimal treatment for T1b renal cell carcinoma.

Finelli A: National Guard Hospital, Riyadh, Saudi Arabia, 25-26 November 2011. Visiting Professor: (1) Performed live roboti prostatectomy. (2) Resident case teaching rounds. (3) The management of small renal masses: Clarity or confusion.

Finelli A: Prostate Cancer Canada Network, Toronto, Ontario, Canada, 25 January 2012. Speaker: Traditional vs Laparoscopic vs Robotic-Assisted: Which type of surgery is best for you?

Hassouna MM: University of Mansoura, Urology and Nephrology department, Mansoura, Egypt, 11 April 2012. Invited Lecturer: Physiological Aspects of the Neurogenic Bladder.

Hassouna MM: Ontario Neurotrauma Foundation, Niagara Falls, Ontario, Canada, 28 April 2012. Invited Speaker: Medical Management of the Overactive Bladder following Spinal Cord Injury Ontario Spinal Cord Injury Research Network.

Kulkarni G: Canadian Update in Surgical Procedures (CUSP) Meeting, Chicago, Illinois, United States, 2011. Invited Speaker: Dr. Girish Kulkarni Open Radical Cystectomy: Pelvic Lymph Node Dissection.

Matthew A: Prostate Cancer Canada - Oshawa Chapter, Oshawa, Ontario, Canada, 6 June 2012. Invited Speaker: Treatment for urinary incontinence and erectile functioning.

Trachtenberg J: Montreal, Quebec, Canada, 27 April 2012. Invited Speaker: Focal Therapy Medisys Health Group.

Trachtenberg J: 5th International Symposium on Focal Therapy and Imaging in Prostate and Kidney Cancer, Durham, North Carolina, United States, 8 June 2012. Invited Speaker: Robotic image - guded focal laser therapy.

### RESEARCH AND INVESTIGATIONS

3D Ultrasound-Guided Trans-Perineal Focal Prostate Therapy Platform. Fenster A, Chin J, Haider MA, Trachtenberg J: Canadian Institutes of Health Research (CIHR), Operating Grant. (\$505,976 2009 - 2014).



A 12 week phase 4 randomized bouble-blind placebo controlled parallel group multicenter trial in overactive bladder subjects to confirm the efficacy of 8 mg fesoterodine compared to 4 mg Fesoterodine. *Radomski S, Hassouna M: Pfizer.* (\$50,000 2011 - 2012).

A multicentre, long-term follow-up study of the safety and efficacy of BOTOX in patients with idiopathic overactive bladder with urinary incontinence. *Radomski S: Allergan Inc.* (\$60,000 2010 - 2013).

A proteomic and genetic biomarker panel for improving Prostate Specific Antigen performance and identify individuals at risk of prostate cancer using a unique patient population accrued in the European Randomized Screening Study for Prostate Cancer. *Zlotta A, Fleshner N: Ontario Institute for Cancer Research.* (\$631,223 2009 - 2012).

A randomized controlled trial of renal hypothermia during partial nephrectomy. Fergusson D, Bergstrahl E, Blute M, Breau R, Chow G, Cook J, Finelli A, Frank I, Jewett M, Karnes R, Knoll G, Leibovich B, Lohse C, Morash C: Canadian Institutes of Health Research (CIHR). (\$404,250 2011 - 2014).

Analysis of novel methylation biomakers distinguishing aggressive from indolent prostate cancer. *Fleshner N: Ontario Institute for Cancer Research.* (\$619,440 2011 - 2014).

Clinical Course of BRCA2-associated prostate cancer. Narod S, Bristow RG, Nam R, Trachtenberg J: Canadian Institutes of Health Research (CIHR). (\$425,989 2010 - 2013).

Development of performance measures for kidney cancer care: Use of a modified Delphi approach. Finelli A, Gagliardi A, Jewett MAS, Woods L: Pfizer Canada Inc. (\$150,000 2010 - 2012).

Genetic, epigenetic and proteomic analysis of the Kallikrein family in search for novel diagnostic prognostic and risk susceptibility algorithms for prosate cancer. *Diamandis E, Fleshner N, Zlotta A: Canadian Institutes of Health Research (CIHR).* (\$649,727 2009 - 2012).

Identification of novel prostate cancer biomarkers in the seminal plasma using a proteomic approach. Jarvi K, Fleshner N: Canadian Cancer Society of Cancer Research. (\$413,853 2010 - 2013).

Integration of a disease self-management approach in the cancer system to optimize health and living with cancer: a road map for implementation. Howell D, Botroff J, Elser C, Fleshner N, Jones J, Krzyzanowski M, McGowan P: Canadian Institutes of Health Research (CIHR). (\$228,250 2010 - 2012).

Investigation of DNA methylation markers for improved prediction of aggressive disease in prostate cancer patients. Bapat B, Fleshner N, Kron K: Prostate Cancer Research Foundation. (\$120,000 2010 - 2012).

Metformin use and prostate cancer incidence and mortality: a novel approach to prostate cancer prevention. Fleshner N: Canadian Cancer Society of Cancer Research. (\$160,882 2011 - 2013).

MRI-Guided Focal Ablation of Prostate Cancerous Tissue. Goldenberg A, Haider M, Kucharczyk W, Sussman M, Trachtenberg J: Canadian Institutes of Health Research (CIHR). (\$375,000 2010 - 2012).

Multicenter randomized study on the efficacy and safety of M3 receptors antagonists on the urinary bladders in spinal cord injured patients.. Hassouna M, Wilson J, McGillivray C: Ontario Neurotrauma Foundation (ONF). (\$401,204 2007 - 2012).

Novel Therapetic Strategies for Obstructive Bladder Disease. *Bagli D, Hassouna M: Canadian Institutes of Health Research (CIHR).* (\$440,000 2008 - 2012).

Personal Training versus Group Exercise for Prostate Cancer Patients on Androgen Deprivation Therapy. Santa Mina D, Alibhai SMH, Matthew AG, Cheung AM, Trachtenberg J, Gardiner D, Welsh B, Ritvo P: University of Guelph-Humber, University of Guelph-Humber Research Fund Committee. (\$10,458 2011).

Photodynamic Therapy Beacon Triggered by Prostate Cancer-Specific mRNA. Zheng G, Wilson B, Trachtenberg J: National Cancer Institute of Canada (NCIC). (\$650,000 2007 - 2012).

Prostate Cancer Proteomic Profiling Program. Evans K, Fleshner N, Bristow R: Ontario Institute for Cancer Research. (\$596,732 2011 - 2012).

Response monitoring and control of prostate focal laser thermal therapy with hybrid trans-rectal NIR optical tomography and 3D ultrasound. *Wilson B, Weersink R, Fenster A, Trachtenberg J: Canadian Institutes of Health Research (CIHR).* (\$500,000 2010 - 2012).

Selenium and vitamin E chemoprevention trial. Coltman C, Albanes D, Alberts S, Bennett C, Brown P, Bubley G, Clinton S, Fleshner N: National Institutes of Health (NIH) (USA). (\$6,450,000 1999 - 2012).

Semen proteomics to identify novel prostate cancer biomarkers. Jarvi K, Briollais L, Fleshner N, Grober E, Ghai S, Lo K, Margolis M, Mullen B, O'Malley M, Tannenbaum D, Toi A, van der Kwast T, Diamandis E, Finelli A, Zlotta A: Canadian Cancer Society of Cancer Research. (\$413,853 2010 - 2013).



SIP-Prostate: Smarter Prostate Imaging and Interventions (SPIRIT). Bauman G, Fenster A, Lee T-Y, Valliant J, Bartha R, Cunningham C, Scholl T, Ward A, van der Kwast T, Trachtenberg J, Chin J, Brock K, Linder U, Lemus JG, Moussa M, Sugar L, Haider M, Pond G, Romagnoli C, Wong E, Bristow R, McKenzie C: Ontario Institute for Cancer Research (OICR), Smarter Imaging Program. (\$2,242,459

Translating evidence to improve comprehensive care of androgen deprived prostate cancer patients and partners. McLeod D, Curran I, Finelli A, Matthew AG, Robinson, IW, Wassersug RJ and the Androgen Deprivation Therapy Working Group: Canadian Institutes of Health Research (CIHR), Planning Grant: Knowledge Tranlation. (\$24,964 2011 - September 2012).

Translating Evidence to Improve Comprehensive Care of Androgen Deprived Prostate Cancer Patients and Partners. McLeod D, Curran J, Matthew AG, Robinson JW, Wassersug RJ: Canadian Institutes of Health Research (CIHR), Planning Grant: Knowledge Translation. (\$24,964 2011 - 2012).

Utilizing metformin to enhance the efficacy of androgen deprivation therapy in prostate cancer. Venkateswaran V, Fleshner N, Klotz L: Canadian Institutes of Health Research (CIHR). (\$92,605 2010

Wyeth/Canadian Institutes of Health Research Clinical Research Chair in Oncology. Jewett M: Canadian Institutes of Health Research (CIHR). (\$1,100,000 2008 - 2013).

### **HONOURS RECEIVED**

Finelli A: Michael Jewett Lectureship Award, Urology, Dept of Surgery, Faculty of Medicine. Received award from residents for best lecture given to post graduate urology trainees. (Postgraduate MD). 2011 - 2012.

Finelli A: Best poster in the AUA Moderated Poster Session, American Urology Association. May

Hassouna MM: Mentor-Trainee-New Investigator Award in Spinal Cord Injury Research, Ontario Neurotrauma Foundation, Canada. 2011.



### Division of Vascular Surgery

Dr. K.W. Johnston Professor

Dr. T.F. Lindsay Professor (Division Head) Dr. G. Oreopoulos **Assistant Professor** Dr. G. Roche-Nagle **Assistant Professor** 

Dr. B.B. Rubin Professor

Dr. L.W.H. Tse Assistant Professor

Dr. D.L.Wooster Professor

### **PUBLICATIONS**

### **Peer-Reviewed Publications**

### Journal Articles

Al-Omran M, Verma S, Lindsay TF. Suboptimal use of risk reduction therapy in peripheral arterial disease patients at a major teaching hospital. Ann Saudi Med: 2011 Jul-Aug; 31(4):371-375.

Brant-Zawadzki MN, Bandari DS, Puangco JJ, Rubin BB. The "liberation procedure" for multiple sclerosis: sacrificing science at the altar of consumer demand. J Am Coll Radiol: 2012 May; 9(5):305-308.

Brenneis C, Coste O, Altenrath K, Angioni C, Schmidt H, Schuh CD, Zhang DD, Henke M, Weigert A, Brüne B, Rubin BB, Nusing R, Scholich K, Geisslinger G. Anti-inflammatory role of microsomal prostaglandin E synthase-1 in a model of neuroinflammation. Journal of Biological Chemistry: 2011; 286(3): 2331-2342.

Cronenwett JL, Johnston KW. Rutherford's Vascular Surgery 7th Edition. (2,450 pages) (Cronenwett JL, Johnston KW, eds). Elsevier, Philadelphia 2011.

Degousee N, Kelvin DJ, Geisslinger G, Hwang D, Stefanski E, Wang X-H, Danesh A, Angioni C, Schmidt H, Lindsay TF, Gelb MH, Bollinger J, Payré C, Lambeau G, Arm JP,



Keating A, Rubin BB. Group V phospholipase A2 in myeloid cells and bronchial epithelial cells promote bacterial clearance after E. coli pneumonia. J Biol Chem: 2011 Oct; 286(41):35650-35662.

Degousee N, Simpson J, Fazel S, Scholich K, Angoulvant D, Angioni C, Schmidt H, Korotkova M, Stefanski E, Wang XH, Lindsay TF, Ofek E, Pierre S, Butany J, Jakobsson PJ, Keating A, Li RK, Nahrendorf M, Geisslinger G, Backx PH, Rubin BB. Lack of microsomal prostaglandin e2 synthase-1 in bone marrow-derived myeloid cells impairs left ventricular function and increases mortality after acute myocardial infarction. Circulation: 2012 Jun; 125(23):2904-

Dutta P, Courties G, Wei Y, Leuschner F, Gorbatov R, Robbins CS, Iwamoto Y, Thompson B, Carlson AL, Heidt T, Majmudar MD, Lasitschka F, Etzrodt M, Waterman P, Waring MT, Chicoine AT, van der Laan AM, Niessen HW, Piek JJ, Rubin BB, Butany J, Stone JR, Katus HA, Murphy SA, Morrow DA, Sabatine MS, Vinegoni C, Moskowitz MA, Pittet MJ, Libby P, Lin CP, Swirski FK, Weissleder R, Nahrendorf M. Myocardial infarction accelerates atherosclerosis. Nature: 2012; 487(7407):325-329, 2012.

Grenville J, Tan KT, Tse LW, Rajan DK, Lindsay TF. Bridging stent-graft pullout force analysis. I Endovasc Ther: 2011; 18 (2): 161-168.

Johnston KW, Kingsbury K for the Vascular Advisory Committee (Drenth B, Dueck A, Feindel C, Fenton J, Forbes T, Hill A, Kribs S, Lindsay T, Nasser H, Pope M, Preyra C, Setterfield, Szalay D). Access to EVAR in Ontario: Observations and Recommendations. Health and Long Term Care. Report to the Ontario Ministry of Health and Long Term Care.

Paquette SG, Banner D, Zhao Z, Fang Y, Huang SS, Lón AJ, Ng DC, Almansa R, Martin-Loeches I, Ramirez P, Socias L, Loza A, Blanco J, Sansonetti P, Rello J, Andaluz D, Shum B, Rubino S, de Lejarazu RO, Tran D, Delogu G, Fadda G, Krajden S, Rubin BB, Bermejo-Martin JF, Kelvin AA, Kelvin DJ. Interleukin-6 Is a Potential Biomarker for Severe Pandemic H1N1 Influenza A Infection. PLoS One: 2012; 7(6):e38214.

Pua U, Sniderman K, Tan KT, Rubin BB, Rajan DK, Oreopoulos GD, Lindsay TF. Iliac branch graft in the treatment of complex aortoiliac aneurysms: early results from a North American institution. Journal of Vascular and Interventional Radiology: 2011; 22:542-549.

Roche-Nagle G, Cinà CS. Cannulation of the right axillary artery for extracorporeal circulation in aortic surgery through a left thoracotomy: a novel technique. J Cardiovasc Surg (Torino): 2012 Feb; 53(1):127-130.

Sam JJ, Heathcote EJ, Wong DK, Wooster DL, Shah H. Hepatitis B learning needs assessment of family medicine trainees in Canada: Results of a nationwide survey. Canadian Journal of Gastroenterology: 2011; 25: 127-134.

Wheatcroft MD, Greco E, Tse L, Roche-Nagle G. Heparin-induced thrombocytopenia in the presence of a heparin-bonded bypass graft. Vascular: 2011; 19(6):338-341.

### **INVITED VISITS**

Johnston KW: Canadian Society for Vascular Surgery, St. John's, Newfoundland and Labrador, Canada, 24 September 2011. Presenter: Analysis of vascular trauma trends in Ontario.

Johnston KW: Winnipeg Vascular and Endovascular Symposium, Winnipeg, Manitoba, Canada, 20 April 2012. Presenter: (1) Carotid ultrasound errors that affect patient care. (2) Vascular Academia Keynote Lecture. Challenging cases from a vascular consulting practice.

Roche-Nagle G: Canadian Society of Vascular Nursing, St. John's, Newfoundland and Labrador, Canada, September 2011. Invited Speaker: Techniques in Critical Limb Salvage.

Roche-Nagle G: Endoluminaries, Toronto, Ontario, Canada, November 2011. Invited Speaker: Prevention of paraplegia in trating thoraic and thoracoabdominal aneurysms.

Roche-Nagle G: Winnipeg Vascular and Endovascular Symposium 2011, Winnipeg, Manitoba, Canada, 2011: Surgical Safety.

Roche-Nagle G: Surgical Society of Newfoundland, St. John's, Newfoundland and Labrador, Canada, March 2012. Invited Speaker: Vascular Trauma.

Tse L: Ontario Society of Chiropodists, Toronto, Ontario, Canada, 10 September 2011. Invited Speaker: In Office Vascular Assessments Including Doppler Techniques.

Wooster DL: American College of Phlebology, Los Angeles, California, 3 November 2011: (1) Expectations of Patients and Referring Physicians in the Management of Varicose Veins. (2) Complications of Foam Sclerotherapy. (3) Implementing Venous Guidelines: Burden of Venous Duplex Ultrasound. (4) PI-CME in Venous Specialty Practice.



Wooster DL: CME Congress, Toronto, Ontario, Canada, 2 June 2012. Presenter: Show-it-better: Ten Techniques to Edit and Optimize Images for Presentations.

Wooster DL: Veith Symposium, New York, New York, 17 November 2011: The Present Status of VSEP.

Wooster DL: AVID, New York, New York, 18 November 2011: (1) A Review Of The Impact Of Simplified Exercise Testing Protocols On Lower Limb Arterial Studies. (2) Review Of The Impact Of The Various Consensus Guidelines On The Practice Of Vascular Ultrasound.

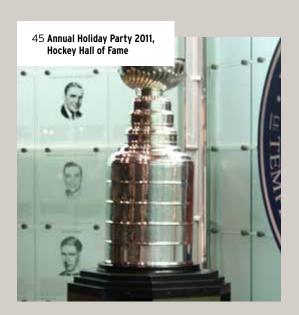
### **RESEARCH AND INVESTIGATIONS**

Comparison of Education alone and Education with pedometer use in self-monitored walking in Peripheral Arterial Disease (PAD): A Pilot Study. Roche-Nagle G: Canadian Vascular Surgery Society (CSVS), CSVS Gore Research Award. (\$5,000 2011).

Expectations of Patients and Referring Physicians in the Management of Varicose Veins. Wooster DL, Dueck AD: Canadian Society for Vascular Surgery, President's Award. (\$1,500 2010 - 2011).

Participation in Acute Rehabilitation and its implications following lower extremity amputation: A mixed-methods study. Roche-Nagle G: Allied Health, Research Funding Award. (\$2,500 2011).

Role of Group V and Group X secretory phospholipase A2 in the innate immune responses to pulmonary bacterial infection. Rubin BB: Canadian Institutes of Health Research. (\$388,520 2009 - 2013).











# Women's College Hospital

John Semple, Surgeon-in-Chief

Women's College Hospital is a designated facility for ambulatory surgery in the Toronto Central LHIN. Surgical programs, with a focus in Ambulatory Care, continue to be a dominant focus in the structure of Women's College Hospital as this institution continues to develop as an Academic Ambulatory Surgical Centre that is fully integrated with the hospital's primary ambulatory strategic plan and current services. Women's College is developing a fully academic affiliated site for inter-professional research and education in ambulatory surgery focused on minimally invasive and specialized ambulatory procedures and innovative models of systems solutions. These innovations include the expedited discharge in postoperative patients and remote monitoring of patients at home using smart phone technology. Women's College continues to develop a hub in a citywide focus in Orthopaedic Sports Medicine and building surgical strength in our core programs of Urology, Orthopedics, Plastic Surgery and General Surgery.

As of September of 2012 we will be 34 weeks from moving into Phase 1 of our new building (attached picture). Within 6 weeks of the move the old WCH building will be demolished. Completion of Phase II of the building will be in 2015.

### **NEW STAFF**

Twenty four surgeons from eight different hospitals now work at Women's College Hospital in our key focus areas. We have ongoing recruiting processes in place in orthopaedics and general surgery. Both positions are co recruitments with the University Health Network.

### **DIVISION REPORTS**

Dr. John Theodoropoulos (Orthopaedic Surgery) successfully defended his MSc thesis in the Institute of Medical Science in Cartilage Regeneration. Dr Theodoropoulos, recently, successfully transitioned his three year CARS process. During this past year he was appointed Head of the Division of Orthopedics at Women's College Hospital. Dr. Mitch Brown chaired the 12th Annual Toronto Breast Surgery Symposium held this past April. Dr. Tulin Cil was awarded the Wightman-Berris Academy Individual Teaching Performance Award and was appointed the Director of Undergraduate Education for the Department of Ambulatory Surgery at Women's College Hospital. Women's College Hospital continues to host international candidates under the Allergan Breast Reconstruction clinical fellowship in the Division of Plastic Surgery.

#### **EDUCATION**

Women's College provides a unique surgical education setting because of its ambulatory mandate. Currently being developed is an ambulatory curriculum with learning objectives specific to ambulatory surgery. We have designated resident rotations in Plastic Surgery, Orthopedics and establishing a resident rotation in General Surgery. The experience rated by undergraduate, resident, fellows and CME is excellent. Teaching volumes have steadily increased over the transition period. A Simulation Education Centre has been established in a multidisciplinary content, with a primary contribution by Orthopaedic Surgery.

### **RESEARCH**

The seven core surgeons at Women's College Hospital hold a total of 15 active research grants through 2011-2012. They are engaged in a variety of clinical, educational and basic research. Several of them supervise residents and fellows in projects and graduate degree programs.



University of Toronto | Department of Surgery 2011-2012 Annual Report | **241** 



### Division of General Surgery

Dr. T. Cil Assistant Professor Dr. G.Y. Hiraki Assistant Professor

Dr. L. Lickley Professor

### **PUBLICATIONS**

O'Leary P, Cil T, Lehane E, Corrigan M: E-Learning: New Technology, Applications and Future Trends. In: Interactive and Digital Media for Education in Virtual Learning, April 2012.

### **INVITED VISITS**

**Cil**, **Tulin**: Association of Surgical Education, San Diego, California, United States, 22 March 2012. Presenter: How Surgeons Think: An exploration of mental practice in surgical preparation. Invited Lectures and Presentations

Cil, Tulin: Canadian Conference on Medical Education, Banff, Alberta, Canada, 16 April 2012. Presenter: How Web-based Learning Compliments Medical Education.

#### RESEARCH AND INVESTIGATIONS

Ambulatory breast cancer surgery: Does ultrasound guided paravertebral block as part of a multimodal regimen offer any advantages? A randomized controlled comparative study. *Morgan, PJ, Abdallah F, Cil T, McNaught A, Srebrnjak M, Kronberg J, Semple J: Women's College Hospital (Toronto, ON), Alternate Funding Plan Innovation Fund.* (\$60,000 2010 –2012).

ISICA - International Study of Incident Cancer. Rossignol M, Leong W, George R, Cil T: LA-SER Centre for Risk Research Inc. (\$93,000 2011 - 2013).

### **HONOURS RECEIVED**

Cil T: Surgical Education Research Fellowship, Association of Surgical Education. 2011 - 2012.

**Cil T:** Wightman-Berris Academy Individual Teaching Performance Award, General Surgery, Department of Surgery, Faculty of Medicine, University of Toronto. (Postgraduate MD). 2011 –2012.

### Division of Orthopaedics

Dr. L. Murnaghan Assistant Professor
Dr. J. Theodoropoulos Assistant Professor

### **PUBLICATIONS**

Chahal J, Marks PH, MacDonald PB, Shah PS, Theodoropoulos J, Bheeshma Ravi B, Whelan DB: Anatomic Bankart Repair Compared With Nonoperative Treatment and/or Arthroscopic Lavage for First-Time Traumatic Shoulder Dislocation. Journal of Arthroscopy: 2012 Apr; 28(4):565-575.

**Dwyer T, Theodoropoulos JS, Wolin PW:** Correlation of pre-operative MRI and MRA with arthroscopically proven articular cartilage lesions of the elbow. Clinical Journal of Sport Medicine: 2012 Sep; 22(5):403-407.

Gnannt R, Chabbra A, Theodoropoulos J, Hodler J, Andreisek G: MR Imaging of the post-operative knee. Journal of Magnetic Resonance Imaging: 2011 Nov; 34:1007-1021.

**Ibrahim T, Howard AW, Murnaghan ML, Hopyan S**: Percutaneous Curettage and Suction for Pediatric Extremity Aneurysmal Bone Cysts: Is it Adequate? Journal of Pediatric Orthopaedics: 2012; 32 (8): 842-847.

Luu S, Patel P, St-Martin L, Leung SOA, Regehr G, Murnaghan ML, Gallinger S, Moulton CA. Waking up the next morning: Surgeons' emotional reactions to adverse events. Medical Education: 2012 Dec; 46(12): 1179-1188.

McSweeney SE, Naraghi A, Salonen D, Theodoropoulos JS, White L: Hip and Groin Pain in Professional Athletes. Canadian Association of Radiologists Journal: 2012 May; 63(2):87-89.

Moktassi A, Popkin C, White L, Murnaghan ML: Imaging of Osteochondritis Dissecans. Orthopaedic Clinics of North America. 2012 Apr; 43(2):201-212.

Murnaghan ML, Browne R, Sucato D, Birch J. Femoral Nerve Palsy in Pavlik Harness Treatment for Developmental Dysplasia of the Hip. Journal of Bone and Joint Surgery- American: 2012; 93:493-499.

### **INVITED VISITS AND PRESENTATIONS**

Murnaghan ML: Canadian Orthopaedic Association, St. John's, Canada, 8 July 2011. Invited Speaker: (1) Hip Arthroscopy in Pediatric Population. (2) Pseudo-dislocation of the Shoulder in Pediatric Patient. (3) Facilitator: Medical Education Research Paper Podium Presentations.

Murnaghan ML: Association for Medical Education Europe, Austria, August 2011. Presenter: Getting Up the Next Morning: Surgeons reactions to adverse events in the operating room.

Murnaghan, ML: COA Basic Science Course. Montreal, Ouebec, Canada. (Continuing Education). 2011, Oct 25. Invited Speaker: Pediatric Orthopaedics- Fractures and Infections.

Murnaghan ML: Rocky Mountain Hospital for Children, POSNA, AOSSM, Beaver Creek, Colorado, United States, 26 January 2012. Invited Speaker: Pediatric Sports Medicine and Trauma Symposium. Femoroacetabular. Impingement, Hip Avulsion Fractures, Intra-articular Knee Fractures.

Murnaghan ML: Paediatric Sports Medicine Conference. University of California San Diego. San Diego, California, United States, 3 March 2012. Presenter: Flat Feet and Torsional Deformities.

Murnaghan ML: Association for Surgical Education, San Diego, California, United States, 22 - 24 March 2012. (1) Facilitator: Research Paper Podium Presentations. (2) Presenter: Casting Simulation in Orthopaedics: Improving a Lost Art. (3) Presenter: Risk Taking in Surgery: The Dynamics of the Comfort Zone. (4) Presenter: Visual Imagery and Mental Rehearsal in Surgery.

Murnaghan ML: University of Pennsylvania, Philadelphia, Pennsylvania, United States, 13 April 2012. Invited Speaker: Cartilage Symposium. Arthroscopic Bone Grafting and Fixation of Unstable Osteochondritis Dissecans of the Knee.

Murnaghan ML: Pediatric Orthopaedic Society of North America - Annual Meeting, Denver, Colorado, United States, 18 May 2012. Presenter: Casting Simulation in Orthopaedics: Improving a Lost Art.

Murnaghan, ML: Canadian Orthopaedic Association, Ottawa, Ontario, Canada, 8-9 June 2012. Speaker: (1) Instructional Course Lecture: Knee Injuries in the Growing Athlete. (2) Symposium: Staying Out of Trouble in Pediatric and Adolescent Athletic Injuries. (3) Facilitator: Medical Education Research Paper Podium Presentations. (4) Presenter: Casting Simulation in Orthopaedics: Improving a Lost Art. (5) Invited Speaker: Pseudo-dislocation of the Shoulder in Pediatric Patient.

Theodoropoulos J: Canadian Orthopedic Association Annual Meeting 2011, St. John's, 17 July 2011. Invited Speaker: (1) Cartilage Tissue Repair using Bioengineered Implants: An In Vitro Model. (2) Shoulder Instability - Surgical Techniques.

Theodoropoulos J: Manitoba Orthopaedic Symposium, Winnipeg, Manitoba, Canada, 20 October 2011. Invited Speaker: (1) Hip and Groin Pain in the NHL. (2) Foot and Ankle Injuries in the NHL.

Theodoropoulos J: McGill University, Department of Orthopedic Surgery, Montreal, Quebec, Canada, 21 October 2011. Invited Speaker: Treatment of Cartilage Injuries.

Theodoropoulos J: NHL Team Physicians Meeting, Ottawa, Ontario, Canada, 28 January 2012: High Ankle Sprain in NHL Hockey

Theodoropoulos J: American Academy of Orthopaedic Surgeons, San Francisco, California, United States, 7 February 2012. Speaker: (1) Supplementation with Platelet Rich Plasma Improves the In Vitro Formation of Cartilage. (2) Diagnostic Accuracy of an iPhone DICOM Viewer for the Interpretation of Magnetic Resonance Imaging of the Knee.

Theodoropoulos J: The International Cartilage Repair Society, Montreal, Quebec, Canada, 12 May 2012. Presenter: (1) Mechanical Stimulation Improves Integration of Tissue Engineered Cartilage. (2) Platelet Rich-Plasma Improves The Formation of Tissue Engineered Cartilage.



Theodoropoulos J: AANA 2012 Annual Meeting, 17 May 2012. Presenter: Effects of Platelet-Rich Plasma on the Mechanical Properties of a Tissue Engineered Cartilage Construct.

Theodoropoulos J: Canadian Orthopaedic Association, Annual Meeting, Toronto, Ontario, Canada, 7-10 June 2012. Invited Lecturer: (1) What I do for the high level athlete with a syndesmosis injury. (2) Mechanical Stimulation Enhances Integration in an in vitro Model of Cartilage Repair.

Theodoropoulos J: McMaster University, Hamilton, Ontario, Canada, 20 June 2012. Invited Lecturer: Tissue Engineering in the Treatment of Cartilage Injuries.

#### RESEARCH AND INVESTIGATIONS

Casting Simulation in Orthopaedics: Improving a Lost Art. Moktar J., Popkin C, Howard A, Murnaghan ML: The Hospital for Sick Children Peri-Operative Services Innovation Grant. (\$9,680 2011 - 2012).

Pressures on surgeons to 'measure up' and their effects on surgical judgment. Moulton CA, Murnaghan ML, Martimianakis MA, Kitto S: Physicians Services Incorporated Foundation (The) (PSI). (\$99,043 CAD. 2011 - 2013).



### Division of Plastic and Reconstructive Surgery

Dr. M.H. Brown Associate Professor Dr. J.L. Semple Professor

#### **PUBLICATIONS**

Bengtson B, Brody G, Brown M, Glicksman C, Hammond D, Kaplan H, Maxwell P, Oefelein M, Reisman N, Spear S, Jewell M. Managing Late Periprosthetic Fluid Collections (Seroma) in Patients with Breast Implants: A Consensus Panel Recommendation and Review of the Literature. Plastic and Reconstructive Surgery: 2011 Jul; 128(1): 1-7.

Davidge K, Morgan P, Brown M, Semple J. Process of care in autogenous breast reconstruction with pedicled tram flaps: expediting postoperative discharge in an ambulatory setting. Canadian Journal of Plastic Surgery: 2012; 20(2): 118.

Moore GW, Semple JL. A tale of two climbers: hypotherima, death, and survival on mount everest. High Altitude Medicine & Biology: 2012; 13(1): 51-56.

Moore GWK, Semple JL. Freezing and Frostbite on Mount Everest: New insights into wind chill and freezing times at extreme altitude. High Altitude Medicine & Biology: 2011; 12(3): 271-275.

Ng WK, Mrad MA, Brown MH. Juvendile Fibroadenoma of the Breast: Treatment and Literature Review. Canadian Journal of Plastic Surgery: 2011 Aug; 19(3):105-107.

Semple JL, Metcalfe K, Ping S, Narod S. International predictors in rates of reconstruction following prophylactic mastectomy in BRCA1 and BRCA2 mutations carriers. Canadian Journal of Plastic Surgery: 2012; 20(2): 126.

Semple JL, Moore GWK, Hoyland G. Global Warming, El Nino, and High-Impact Storms at Extreme Altitude: Historical Trends and Consequences for Mountaineers. Journal of Applied Meteorology and Climatology: 2011; 50: 2197-2209.

Semple JL, Sharpe S. Remote monitoring of quality of recovery of postoperative patients at home using mobile device (smart phone). Canadian Journal of Plastic Surgery: 2012; 20(2): 113.

### **INVITED VISITS**

Brown MH: Allergan Academy, Denver, Colorado, United States, 24-27 September 2011. (1) Invited Lecturer: How 3D Imaging for the breast can improve your close rates and differentiate your practice. (2) Chair: Revisional breast augmentation: Dealing with capsular contracture, fold asymmetries and nipple malposition. (3) Invited Speaker: Revision of the unsatisfactory aesthetic and reconstructive breast.

Brown MH: LifeCell, Phoenix, Arizona, United States, 15 October 2011. Invited Speaker: Single stage breast reconstruction with Alloderm.

Brown MH: New York Society of Plastic Surgeons, New York, New York, United States, 10 December 2011. Invited Lecturer: Treatment of capsular contracture and implant malposition.

Brown MH: Division of Plastic and Reconstructive Surgery, Emory University, Atlanta, Georgia, United States, 13 January 2012. Invited Speaker: Revision in aesthetic breast surgery.

Brown MH: Southeastern Society of Plastic and Reconstructive Surgeons, Atlanta, Georgia, United States, 13-14 January 2012. Invited Speaker: (1) Tissue expander vs. Direct to implant breast reconstruction: Options and economics. (2) Implant selection in breast surgery - review of 1700 cases.

Brown MH: American Society of Aesthetic Plastic Surgeons, Las Vegas, Nevada, United States, 28-29 January 2012. Invited Speaker: (1) Implant selection in breast surgery. (2) Auto-augmentation mastopexy. (3) Revision of the unsatisfactory aesthetic breast.

Semple, JL: International Hypoxia Symposia XVII, Lake Louise, Alberta, Canada, 2011. (1) Freezing and Frostbite on Mount Everest: New Insights into Wind Chill and Freezing Times at Extreme Altitude. (2) Long Distance Transport of Pollution and Climate Change in the High Himalaya: Implications for Mountaineers and Indigenous Communities.

Semple, JL: Canadian Breast Cancer Foundation, Toronto, Ontario, November 28th, 2011. Canadian Breast Cancer Foundation Research Community Networking Event.

Semple, JL: WellSpring Westerkirk House, Sunnybrook Health Science Centre, Toronto, Ontario, January 31st, 2012. Timing and Types of Breast Cancer Reconstruction Update.

Semple, JL: 5th Annual Canadian Breast Cancer Foundation Volunteer Awards Ceremony and High Tea. Toronto, Ontario, April. 15th, 2012.

Semple, IL: 4th International Symposium on Hereditary Breast and Ovarian Cancer, Montreal, Ontario, April 25th -27th, 2012. Prophylactic mastectomy for the prevention of breast cancer and breast reduction.

Semple, JL: 12th Annual eHealth Summit 2012, Minett, Ontario, May 2nd-4th, 2012. Monitoring a patient's quality of care and recovery while at home following discharge from hospital.

Semple, JL: Leaders for the Cure: Canadian Breast Cancer Foundation-Ontario, Toronto, Ontario, May 3rd, 2012. Running Research and Reconstruction.

Semple, JL: The Academy of the Impossible, Toronto, Ontario, May 24, 2012. Digital Solutions and the Future of Healthcare.

Semple, JL: Invited member Lymphedema CIHR Team Grant, Ottawa, Ontario, January 19th -20th, 2012. CIHR Team Grant Lymphedema (CIHR).

Semple, JL: Breast Cancer Today: An Evening of Care and Community. Canadian Breast Cancer Foundation, Ontario Region Seminar Series, Barrie, Ontario, May 20th 2010. Update in Breast Reconstruction.

Semple, JL: Canadian Breast Cancer Foundation -Ontario Region Chair in Surgical Breast Cancer Research - Women's College Hospital, Toronto, Ontario, May 31st, 2010. Key Note Speaker-Importance of the Work of the Research Chair.

Semple, JL: The TRAM Flap with 23 Hour Stay: Challenges and Efficiencies in an Ambulatory Setting. 11th Annual Toronto Breast Surgery Symposium Sutton Place Hotel, Toronto Ontario, Canada. April 14th, 2011.

Semple, JL: 11th Annual Toronto Breast Surgery Symposium Sutton Place Hotel, Toronto Ontario, Canada. April 14th 2011. Invited Panelist: Challenges on Breast Reconstruction,

Semple, JL: 16th Congress of the International Confederation for Plastic Reconstructive and Aesthetic Surgery (IPRAS), Vancouver, Canada, May 22nd-27th, 2011. (1) Speaker: Processes of Care in Autogenous Breast Reconstruction with Pedicled TRAM Flaps: Expediting Postoperative Discharge in an Ambulatory Setting. (2) Speaker: Surgical Management of Post Mastectomy Lymphedema: Options and Outcomes. (3) Invited Moderator: Breast Reconstruction Panel.

Semple, JL: 66th Annual Canadian Society of Plastic Surgeons Meeting, Toronto, Ontario, Jun 5th - Jun 9th, 2012. (1) Speaker: International predictors in rates of reconstruction following prophylactic mastectomy in BRCA1 and BRCA2 mutation carriers. (2) Remote monitoring of quality of recovery of postoperative patients at home using mobile device (smart phone).

Semple, JL: International Lymphedema Framework Conference, Toronto, Ontario, June 16th -June 18th, 2011. (1) Speaker: Evaluation of Potential therapies for postsurgical Lymphedema in the sheep model. (2) Speaker: Options for surgery for Lymphedema Post Mastectomy for Breast Cancer.



### RESEARCH AND INVESTIGATIONS

Impact of Radiation Therapy on the Lymphatic Circulatory System: Relevance to Breast Cancer Related Lymphedema. *Johnston M, Semple J: Canadian Breast Cancer Foundation, Ontario Regional Chapter.* (\$430,631 2011 -2014).

Implementation of 23 hr length of stay for breast reconstruction surgery: Quality of recovery evaluation following discharge. Semple J, Morgan P, Davidge K, Brown M: Women's College Hospital (Toronto, ON), Alternative Funding Plan (AFP) Innovation Grant. (\$29,841 2011 -2012).

Quality of recovery in women undergoing autogenous breast reconstruction in an ambulatory setting. *Morgan P, Davidge K, Semple J, Brown M: Physicians Services Incorporated Foundation (The) (PSI).* (\$13,500 2011).

The use of human acellular dermal matrix in one-stage implant breast reconstruction: A multicenter, randomized, controlled trial. *Zhong T, Baxter N, Hofer S, Brown M, Beber B, Semple J: Canadian Breast Cancer Foundation - Ontario Region Research Project Grant Program.* (\$368,449 2011 - 2014).

### **HONOURS RECEIVED**

Semple JL: Canadian Breast Cancer Foundation-Ontario Region: Foundation Fellowship Review. 2011.

Semple JL: Foundation Fellowship Review, Canadian Breast Cancer Foundation - Ontario Region. 2011.

Semple JL: Joan Lesmond Quality Award for TRAM Working Group "An Innovative Ambulatory Model of Care for Women Undergoing Breast Cancer Reconstruction". 2011.

Semple JL: Leading Practice Award: Ambulatory Model of Care for Breast Reconstruction by Accreditation Canada 2010. 2011.



### **Division of Urology**

Dr. E.D. Grober

Assistant Professor

#### **PUBLICATIONS**

Al Bakri A, Lo K, Grober E, Cassidy D, Cardoso JP, Jarvi K. Time for Improvement in Semen Parameters After Varicocelectomy. Journal of Urology: 2012 Jan;187(1):227-231.

Batruch I, Smith CR, Mullen BJ, Grober E, Lo KC, Diamandis EP, Jarvi KA. Analysis of Seminal Plasma from Patients with Non-obstructive Azoospermia and Identification of Candidate Biomarkers of Male Infertility. Journal of Proteome Research: 2012 Mar; 11(3):1503-1511.

Bostrom PJ, Toren PJ, Xi H, Chow R, Truong T,Liu J, Lane K, Legere L, Chagpar A, Zlotta AR, Finelli A, Fleshner NE, Grober ED, Jewett MA. Point of Care Clinical Documentation: Assessment of a bladder cancer informatics tool (eCancerCareBladder): a randomized controlled study of efficacy, efficiency and user friendliness compared with standard electronic medical records. Journal of the American Medical Informatics Association: 2011 Nov-Dec; 18(6):835-841.

Cassidy D, Jarvi K, Grober ED, Lo K. Varicocele Surgery or Embolization: Which is better? Canadian Urological Association Journal (CUAJ): 2012; 6(4):266-268.

**Domes T, Grober ED, Jarvi KA, Lo K, Mazulli T, Mullen B.** The Utility and Cost of Routine Chlamydia Trachomatis and Neisseria Gonorrhoeae Testing in an Asymptomatic Male Infertility Population. Journal of Urology: 2011; 185(4);874.

**Domes T, Lo K, Grober ED, Mullen B, Mazzulli, Jarvi KA.** The Utility and Cost of Chlamydia Trachomatis and Nisseria Gonorrhoeae Screening of an Asymptomatic Male Infertility Population. Fertility and Sterility: 2012 Feb; 97(2):299-305.

**Domes T, Lo K, Grober ED, Mullen BM, Mazzulli T, Jarvi KA.** The incidence and effect of bacteriospermia and elevated seminal leukocytes on semen parameters. Fertility and Sterility: 2012 May; 97(5):1050-1055.

Grober ED, Horovitz D, Jarvi KA, Lo K, Tjong V. Vasectomy Reversal Provides Long Term Pain Relief for Men with Post-Vasectomy Pain Syndrome. Journal of Urology: 2011; 185(4):Se243.

Grober ED, Fanipour M, Roberts M, Victor U. Intra-operative assessment of microsurgical skill using hand motion analysis establishing learning curves of surgical competence during vasectomy reversal. Journal of Urology: 2012; 187(4): e802-e803.

Grober ED, Karpman E, Fanipour M. Vasectomy Reversal Outcomes among Patients with Vasal Obstructive Intervals of Greater than 10 Years. Journal of Urology: 2012; 187(4):e804.

Grober ED, Shamloul R, Bella AJ. Outpatient Inflatable Penile Prosthesis Insertion: Rationale and Outcomes - A Canadian Perspective. Journal of Sexual Medicine: 2011 Nov; 9 (1):32.

Horowitz D, Tjong V, Domes T, Lo K, Grober ED, Jarvi KA. Vasectomy Reversal Provides Long Term Pain Relief for Men with Post-Vasectomy Pain Syndrome. Journal of Urology: 2012 Feb; 187(2):613-617.

Kagedan D, Lecker I, Batruch I, Smith C, Kaploun I, Lo K, Grober ED, Diamandis E, Jarvi K. Characterization of the Seminal Plasma Proteome in Men with Prostatitis by Mass Spectrometry. Clinical Proteomics Journal: 2012 Feb; 9(1):2.

Keays M, Weber B, Lorenzo A, Grober ED, Lo K, Jarvi K. Incidence and Characteristics of Male Cancer Survivors Presenting to Infertility Practice. Canadian Urological Association Journal: 2011; 3(3S):110.

Perlis N, Lo K, Grober ED, Spencer L, Lau S, Jarvi K. Infrequent intercourse and infertility: Which male factors predict the frequency of sex? Journal of Urology: 2012; 187(4): e922.

Satkunasivam R, Mullen B, Lo K, Grober ED, Jarvi KA. Erectile Dysfunction, Hypogonadism and Hypogonadal Symptoms are Frequently Found in Men with Infertility. Canadian Urological Association Journal: 2011; 5(3S):S68.

Shamloul R, Bella AJ, Kaploun L, Grober ED, Al-Bakri A. Use of a Wide Bore 18-Gauge Needle for Intralesional Treatment of Peyronie's Disease is Safe. Journal of Sexual Medicine: 2011 Nov; 9(1):55.

### **INVITED VISITS**

Grober ED: Specialists Consultative Meeting, Toronto, Ontario, Canada. (Continuing Education), Oct. 2011. Testosterone Deficiency Syndrome: Diagnosis, Treatment & Prostate Health.

Grober ED: Sexual Medical Society of North America 2011, Las Vegas, United States, November 2011. Outpatient Inflatable Penile Prosthesis Insertion: Rationale and Outcomes - A Canadian Perspective.

Grober ED: American Urological Association Meeting 2012. Atlanta, Georgia, United States. Presenter. (1) Intra-Operative Assessment of Microsurgical Skill Using Hand Motion Analysis Establishing Learning Curves Of Surgical Competence During Vasectomy Reversal. (2) Vasectomy Reversal Outcomes among Patients with Vasal Obstructive Intervals of Greater Than 10 Years.

Grober ED: European Urology Association - Canadian Urology Association. Toronto, Ontario, Canada. How Do You Know You Can Operate on Real Patients?

Grober ED: Paladin Labs CUA Meeting 2012 Banff, Alberta. Toronto, Ontario, Canada. (Continuing Education). Testosterone Deficiency Syndrome - From Concept to Treatment.

### RESEARCH AND INVESTIGATIONS

Analysis of the Accuracy and Reliability of Testosterone Concentration in Testosterone Products from Compounding and Internet Pharmacies. Grober, ED: Paladin Labs. (\$5,500 2011 - 2012).

Novel Semen Biomarkers to Identify Sperm Production in Men with Infertility. Jarvi KA, Diamandis EP, Lo K, Mullen B, Grober ED: Canadian Institutes of Health Research (CIHR). (\$152,499) 2011 - 2012).

Semen Proteomics to Identify Novel Prostate Cancer Biomarkers. Jarvi KA, Diamandis E, Finelli A, Fleshner N, Zlotta A, Briollais L, Ghai S, Lo K, Margolis M, Mullen B, OMalley M, Tannenbaum D, Toi A, van der Kwast T, Grober ED: Canadian Cancer Society. (\$413,853 2010 - 2013).

Validation of Real-time, Intra-operative, Surgical Competence (RISC) assessments linked to patient outcomes. Grober ED, Jewett MAS, Lorenzo A: Association for Surgical Education, CESERT. (\$25,000 2010 - 2012).



## Division of Anatomy

Dr. A. Agur Professor
Dr. B. Ballyk Senior Lecturer
Dr. P. Koeberle Assistant Professor

Dr. J. Laprade Lecturer

Dr. C.M. Morshead Associate Professor (Division Head)

Dr. H.S. Sun Assistant Professor

Dr. I.M. Taylor Professor Dr. M.J. Wiley Professor

### **PUBLICATIONS**

Bae CYJ, Sun HS. TRPM7 in Cerebral Ischemia and Potential Target of Drug Development for Stroke. Acta Pharmacologica Sinica 32: 725-733, 2011.

Cooke MJ, Wang Y, Morshead CM, Shoichet MS. Controlled cortical delivery of epidermal growth factor stimulates endogenous neural stem cell proliferation in the stroke-injured brain. Biomaterials 32:5688-697, 2011.

Erlandsson A, Lin A, Fenggang Y, Morshead CM. Immunosuppression promotes endogenous neural stem and progenitor cell migration and tissue regeneration after ischemic injury. Exp Neurol 230(1):48-57, July 2011.

**Hui K, Arnot M, Shin HS, Sun HS, Feng ZP.** Differential regulation of low and high voltage-activated calcium channels in neonatal rat myocytes following chronic PKA modulation. Channels 5(4): Epub ahead of print, 2011.

Jaglal SB, Donescu OS, Bansod V, Laprade J, Thorpe K, Hawker G, Majumdar SR, Meadows L, Cadarette SM, Papaioannou A, Kloseck M, Beaton D, Bogoch E, Zwarenstein M. Impact of a centralized osteoporosis coordinator on post-fracture osteoporosis management: a cluster randomized trial. Osteoporos Int, 16 July 2011. [Epub ahead of print]

Nejatbakhsh N, Guo CH, Lu T, Pei L, Smit A, Sun HS, van Kesteren R, Feng ZP. Caltubin promotes neurite elongation and attenuates axonal degeneration by regulating local tubulin levels. J Neurosci 31(43): 15231-15244, 2010.

**Piccin D, Morshead CM.** Wnt signaling regulates symmetry of division in adult neural stem cells. Stem Cells 29:528-538, 2011.

Quan Y, Barszczyk A, Feng ZP, Sun HS. Current Understanding of KATP Channels in Neonatal Diseases. Acta Pharmacologica Sinica 32: 765-780, 2011.

Wang Y, Cooke MJ, Lapitsky Y, Wylie RG, Sachewsky N, Corbett DC, Morshead CM, Shoichet MS. Transport of epidermal growth factor in the stroke-injured brain. J Contr Release 149:225-235, 2011.

Wylie R, Ahsan S, Aizawa Y, Maxwell K, Morshead CM, Shoichet MS. Three-dimensional, spatially controlled simultaneous patterning of multiple growth factors in hydrogels. Nature Materials 10:799-806, 2011. Laprade J: CPA Congress, Whistler, British Columbia, Canada, 18 July 2011. Lead instructor: Bone FitTM Advanced Training Workshop.

### **INVITED VISITS**

**Laprade J:** Mini-workshop for PTs & PTAs, Trenton, Canada, 6 November 2011. Exercise in Osteoporosis: How to Safely Guide & Adapt.

University of Toronto | Department of Surgery 2011-2012 Annual Report | **248** 

**Laprade J:** Community HCP presentation, Peterborough, Canada, 11 November 2011. Exercise in Osteoporosis: How to Safely Guide & Adapt.

**Laprade J:** Laurentian University, Sudbury, Ontario, Canada, 27 November 2011. Co-instructor: Bone FitTM Advanced Training Workshop.

**Laprade J:** Thornhill, Ontario, Canada, 3 December 2011. Lead instructor: Bone FitTM Advanced Training Workshop.

Morshead CM: Society for Neuroscience, Washington, DC, United States, October 2011. (1) Adult-derived primitive neural stem cells are a distinct population that can be manipulated independent of definitive neural stem cells. (2) Senescent neural stem cells in the aged brain are responsive to signals from the young adult brain. (3) The targeted ablation of GFAP expressing neural stem cells reveals novel LIF-responsive neural stem cell in the adult mouse brain.

Morshead CM: CUCOH (Canadian Undergraduate Conference on Health care), Queen's University, Kingston, Ontario, November 2011. Invited Speaker: Adult Neural Stem Cells: From basic biology to tissue repair.

Morshead CM: TERMIS-NA, Houston, Texas, United States, December 2011. Using endogenous and exogenous neural stem/progenitor cells for repair of the stroke injured brain.

**Sun HS:** 13th SCBA (Society of Chinese Bioscientists in America) International Conference, Guangzhou, China, 2011. Symposium Speaker: (1) Role of TRPM7 Channels in Stroke. (2) Ion Channels: the targets of Neuroprotection and regeneration.

**Sun HS**: Second International Annual Conference on Models of Human Diseases, Toronto, Ontario, 2011. Rodent Models for Stroke Research.

**Sun HS:** University of Hong Kong, Hong Kong, July 2011. Ion Channels in Cerebral Ischemia and Neuroprotective Target for Stroke.

Sun HS: ZhongShan School of Medicine, Sun Yet-Sen University, Guangzhou, China, July 2011. Role of Ion Channels in Neuroprotection and Stroke

**Sun HS:** Chinese Academy of Sciences, Shanghai Institute of Materia Medica, Shanghai, China, July 2011. Role of Ion Channels in Cerebral Ischemia and Potential Therapeutic Target for Stroke.

Sun HS: Fudan University, Shanghai, China, July 2011. Role of Ion Channels in Cerebral Ischemia and Stroke.

#### **RESEARCH AND INVESTIGATIONS**

Advances in Cerebral Palsy: Cell to Person. Fehlings D, Morshead C, et al: Ontario Brain Institute. (\$2,000,000 2011 - 2013).

Bioengineered cell delivery systems. Shoichet M, Morshead C, Tator C, van der Kooy D: NSERC/CIHR, CHRP. (\$658,000 2011 - 2014).

Grant-in Aid. Sun HS. Heart and Stroke Foundation of Canada (\$128,000 2011 -2013).

Leaders Opportunity Fund (LOF). Sun HS: Canada Foundation for Innovation (CFI). (\$240,000 2011 - 2016).

Ontario Initiative in Personalized Stem Cell Medicine. Rossant J, Morshead C, et al: CFI-New Initiatives. (\$18,932,011 2012).

Promoting self-repair of the stroke injured brain using neural stem cell stimulation and rehabilitation. *Morshead C, Corbet D, Shoichet M: Heart and Stroke Foundation.* (\$280,000 2012 – 2015).

Regenerative Networks: Recruiting adult stem cells for tissue repair. *Miller F, Morshead C, Biernaskie J, Kaplan et al: Stem Cell Network Global Initiative.* (\$3,500,000 2011 – 2014).

Repairing the injured spinal cord. Morshead C, Fehlings M et al: Krembil Foundation (The). (\$1,500,000 2011 - 2013).

### **HONOURS RECEIVED**

**Ballyk BA**: W.T. Aikins Award for Excellence in Undergraduate Teaching within the Faculty of Medicine, University of Toronto. (Undergraduate MD). 2011.

University of Toronto | Department of Surgery 2011-2012 Annual Report | **249** 

## Research In Education

Dr. S. Kitto Assistant Professor
Dr. R.R. Sonnadara Assistant Professor
Dr. N. Woods Assistant Professor

### **PUBLICATIONS**

Goldszmidt M, Minda JP, Devantier SL, Skye AL, Woods NN (2011). Expanding the basic science debate: the role of physics knowledge in interpreting clinical findings. Advances in Health Sciences Education: 2011; 17(4): 547-555.

Higgins VJ, Bryant MJ, Villanueva EV, Kitto SC. Managing and avoiding delay in operating theatres: a qualitative, observational study. Journal of Evaluation in Clinical Practice: 2011 Oct 26; doi: 10.1111/j.1365-2753.2011.01787.x.

Kitto S, Bell M, Peller J, Silver I, Etchells E and Reeves S. Improving Patient Outcomes: Mapping Practice boundaries and intersections between the domains of Continuing Education, Knowledge Translation, Patient Safety and Quality Improvement. Advances in Health Sciences Education. online first December 2011. doi:10.1007/s10459-011-9340-1.

Kitto S, Schmitt M, Olson C. Call for Papers: Workplace learning in Continuing Interprofessional Education. Journal of Interprofessional Care: 26 (4): 259-260.

Marshall S, Kitto S, Shearer B, Finnigan M, Hoggins T and Buist M. Why don't hospital staff activate the Rapid Response System (RRS)? How frequently is it needed and can the process be improved? Implementation Science: 2011; 6:39.

Nordquist J, Kitto S, Peller J, Ygge J, Reeves S. Editorial: Focusing on future learning environments: Exploring the role of space and place for interprofessional education. Journal of Interprofessional Care: 25 (6): 391-393.

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**Woods NN.** Evaluation matters: lessons learned in the evaluation of surgical teaching. Surgeon: 2011; 9: S43-45.

Woods NN, Mylopoulos M, Brydges R. Informal self-regulated learning on a surgical rotation: uncovering student experiences in context. Advances in Health Sciences Education Theory and Practice: 2011; 16(5):643-653.

### **INVITED VISITS**

Kitto S. AMEE 2011 Pre-Conference Workshop, Aug. 28, 2011. Conducting Qualitative Research: From conception to analysis.

Sonnadara RR. Sport Leadership Meeting, Toronto, 2011. Tapering for Performance.

Sonnadara RR. International Conference on Residency Education, Quebec City, 2011. Orthopaedic Boot Camp II: Examining retention rates for skills taught through an intensive laboratory-based surgical skills course.

Sonnadara RR. Association for Surgical Education Meeting. Boston, 2011.A novel multimodal platform for assessing surgical technical skills.

Sonnadara RR. International Conference on Residency Education, Ottawa, 2012.

1/ Orthopaedic Boot Camp III: Examining the efficacy of self-regulated learning during an intensive laboratory-based surgical skills course. 2/ Evaluating performance in a Competencybased Residency Program.

Sonnadara RR. Association for Surgical Education Meeting, California, 2012. A new approach to evaluating technical resident performance.

Sonnadara RR. American College of Surgeons Accredited Educational Institutes Consortium Meeting, Chicago, 2012. 1/ Orthopaedic Boot Camp III: Examining the efficacy of self-regulated learning during an intensive laboratory-based surgical skills course. 2/ Examining retention rates for skills taught through an intensive laboratory-based surgical skills course.

Sonnadara RR. Canadian Orthopaedics Association Meeting, Ottawa, 2012. Examining retention rates for skills taught through an intensive laboratory-based surgical skills course.

Sonnadara RR. Canadian Conference for Medical Education, Banff, 2012.

Examining retention rates for skills taught through an intensive laboratory-based surgical skills course.

### RESEARCH AND INVESTIGATIONS

A Pilot Project to Explore the Determinants of Knowledge Use in a Medical Education Context. Knowledge Translation Canada. Reeves S, Leslie K, Légaré F, Silver I, Rosenfield J, Hodges B, Curran V, Kitto S, Armson H. KT Canada Seed Funding Award. (\$30,000 2011-2012)

Assessing consistency of 'slowing down' moments in surgical expertise. Sonnadara RR, Moulton CA. Medical Council of Canada Research in Clinical Assessment. (\$33,465 2012)

Developing and assessing preparation for future learning in medical students. Mylopoulos M. Woods NN. Medical Council of Canada. (\$34,897 2011-2012)

Evaluation of Future Learning Environments- How Space Impacts Learning. Kitto S, Reeves S. Karolinska Institutet. (\$22,000 2011-2012)

Hand Hygiene Compliance. St. Michael's Hospital. Kitto S, Yeung E, Reeves S. Division of General Internal Medicine, Department of Risk Management & Quality Improvement and the Knowledge Translation Program. (\$22,000 2011-2012)

Hand Hygiene and Knowledge Translation: A merger of hand hygiene practices between 2 Bond and 7 CC North. Muller M, McKernan P, Hughes B, Kitto S, Straus S, Siddique N, Leung E. St. Michael's Hospital, Quality Innovation Fund. (\$16,750 2011-2012)

Improving Communication and Patient Safety in Trauma Patients Admitted to the Intensive Care Unit- A Pilot Feasibility Study. Zakrison TA, Nathens A, Kitto S. Physicians Services Incorporated Foundation (The) (PSI). (\$12,197 2011-2012)

Improving Patient Outcomes: Mapping practice boundaries and intersections between the domains of Continuing Education, Knowledge Translation, Patient Safety and Quality Improvement. Kitto S, Bell M, Reeves S, Sargeant J, Etchells E, Silver I. Association of Faculties of Medicine of Canada. (\$20,000 2011-2012)

Making Handover Safer for our Trauma Patients- A grassroots approach to quality. Zakrison T, Nathens A, Leung E, Kitto S, McFarlan A, McCredie V, Campos, ID, Baker A, Barratt L, Hicks C. St. Michael's Hospital. Quality Innovation Fund. (\$18,921 2011-2012)

Pressures on surgeons to 'measure up' and their effects on surgical judgment. *Moulton CA, Murnaghan ML, Martimianakis MA, Kitto S. Physicians Services Incorporated Foundation (The) (PSI).* (\$99,043 2011-2013)

Qualitative Analysis of the HPB Community of Practice. University of Toronto. *Kitto S, Gallinger S, Moulton CA. University of Toronto.* (\$26,500 2010-2012)

Strengthening the Sociological Fidelity of Interprofessional Team-based Simulation Scenarios: an empirical study. University of Toronto. Reeves S, Boet S, Sharma S, Kitto S. Continuing Education Research Funds, Office of Continuing Education Faculty of Medicine. (\$4,995 2011-2012)

The benefits of testing: Using tests to enhance student performance. *Baghdady MT, Woods NN. Medical Council of Canada.* (\$16,830 2011-2012)

### Table of Photographs

#	Description	Page	# Description	Page
3	Gallie Day Gala Dinner: Georges Azzie (via Skype), James Rutka.	5	23 Strat Plan Meeting: James Rutka.	40
			26 Strat Plan Meeting: David Latter.	40
2	Gallie Day Gala Dinner, Royal York Hotel: James Rutka, Amanda Levine.	5	27 Strat Plan Meeting: Jay Rosenfield.	40
1	Gallie Day Gala Dinner: Dean Whiteside, James Rutka.	5	25 Strat Plan Meeting: Person One.	40
	Gallie Day Gala Dinner: Ori Rotstein, James Rutka, Robin McLeod, Ben Alman, David Latter.	7	24 Strat Plan Meeting: Saäd Rafi.	40
			28 Strat Plan Meeting: Mark Bernstein.	40
6	Gallie Day Gala Dinner	9	29 The Surgical Exploration and Discovery Program 2012	44
5	Tovee Postgraduate Prize: Ron Levine, Peter Ferguson.	9	30 Clinical Epidemiology: David Urbach, Justin Dimick,	48
8	Kergin Lecture. Feb 3, 2012: John Semple, Thomas Waddell, David Sugarbaker, Shafique Keshavjee	11	David Latter.	
			31 Gallie Day Gala Dinner: Mojgan Hodaie, Bernard Langer.	70
7	Strategic Planning Committee Members: James Rutka, Carol Swallow, Ron Levine, Darina Landa, George Christakis, Paul Karanicolas, Lakho Sandu.	11	32 Gallie Day Gala Dinner: Albert Yee, Robin McLeod, Cari Whyne.	70
9	Suture Workshop for medical students	12	33 Strat Plan Meeting: Andy Williams, Person two, Kevin Imnie. Carol Swallow.	75
10	Past Chairs of the Department of Surgery: Richard Resnik, Bernard Langer, Donald Wilson, John Wedge,	13	34 Gordon Murray Lecture: Philippe Menosché.	79
	James Rutka, David Latter.		35 Royal York Gala: Mari Rutka, Philippe Menosché.	99
11	2011 Annual Holiday Party.	14	36 Gallie Day Gala Dinner: Alina Gasper, Martin McKneally,	99
12	The Harland Smith Lecture, March 29, 2012: Cindi Morshead, Michael Fehlings, Daniel Riew, Andres Lozano.	16	James Rutka.  37 Gallie Day Gala Dinner: Zane Cohen, Benedict Rogers,	99
14	The John Palmer Lecture: Paul Greig, Michael Choti, Ori Rotstein.	19	Boris Krischek	,,
			38 Gallie Day Gala Dinner: Dean Whiteseide, Darina Landa,	101
13	Gallie Day Gala Dinner: Alex Mine Jazz Quartet	19	James Rutka.	
15	General Surgery Hockey Team	21	39 Gallie Day Gala Dinner: David Latter, Nathalie Fazel, Kristen Davidge.	168
16	9th Annual Neurosurgery Charity Softball Tournament, June 9, 2012, Central Park, N.Y.	25	40 Gallie Day Gala Dinner: Ren-ke Li, Ori Rotstein.	168
17	The Division of Orthopaedics Faculty	28	41 Gallie Day Gala Dinner: Sylvia Perry, Stephanie Neilson, Nancy Condo, Daroina Landa, Alina Gaspar, Val Cabral	170
18	Plastic and Reconstructive Surgery Hockey Team	30	42 Gordon Murray Lecture: Philippe Menosché.	172
19	Annual Lister Prize and Peters Prize Presentation, November 4, 2011: Thomas Waddell, Michael Taylor.	33	43 Gallie Day Gala Dinner: Philippe Menosché, Rosalind Bradford, James Rutka.	172
20	Gallie Day Gala Dinner: Dean Whiteside.	33	44 Annual Holiday Party 2011	195
21	George Armstrong Peters Prize, Gallie Day: Teodor Grontcharov, Andy Smith	35	45 Annual Holiday Party 2011, Hockey Hall of Fame	240
22	SpineFEST 2012: The Old Mill Inn, June 15, 2012.	38		

University of Toronto | Department of Surgery 2011-2012 Annual Report | **252** 

## **Cross Appointments**

Dr. A.J. Baker (Anaesthesia)

Dr. B. Bapat (Laboratory Medicine and Pathobiology)

Dr. P. Birek (Dentistry)
Dr. A. Campbell (Medicine)

**Dr. J. Carson** (Family and Community Medicine)

Dr. W.A. Cassar-Demajo (Anaesthesia)

Dr. A. Daar (Public Health Sciences)
Dr. A. Damyanovich (Medical Imaging)
Dr. J.E. Davies (Dentistry)

Dr. A.D. DePetrillo (Obstetric and Gynaecology)

Dr. E. Diamandis (Laboratory Medicine and Pathobiology)

Dr. R.J. Eby (Medicine)

Dr. V.L. Fornasier (Laboratory Medicine and Pathobiology)

Dr. A. Fox (Medical Imaging)
Dr. J. Freeman (Otolaryngology)
Dr. R. Gilbert (Otolaryngology)
Dr. M. Greenberg (Pediatrics)

Dr. M.D. Grynpass (Laboratory Medicine and Pathobiology)

Dr. P.J. Gullane (Otolaryngology)
Dr. B. Harvey (Public Health Sciences)

Dr. B. Hinz (Dentistry)
Dr. J. Irish (Otolaryngology)
Dr. J. Irvine (Psychiatry)

Dr. G. Jackowski(Laboratory Medicine and Pathobiology)Dr. M.G. Johnston(Laboratory Medicine and Pathobiology)Dr. R. Kandel(Laboratory Medicine and Pathobiology)

Dr. W. Kucharczyk (Medical Imaging)
Dr. G.A. Levy (Medicine)
Dr. C. Lumsden (Medicine)
Dr. A. Macdonald (Medicine)

Dr. J. McGlade (Medical Biophysics)

**Dr. D.A.G. Mickle** (Laboratory Medicine and Pathobiology)

Dr. M. Milner (Rehabilitation Sciences)
Dr. W. Montanera (Medical Imaging)

Dr. J. Mullen (Laboratory Medicine and Pathobiology)

Dr. A. Narold (Public Health Sciences)
Dr. M. Ojha (Rehabilitation Sciences)

Dr. K.P.H. Pritzker (Laboratory Medicine and Pathobiology)

**Dr. P. Ritvo** (Public Health Sciences)

**Dr. A. Romaschin** (Laboratory Medicine and Pathobiology)

Dr. J. Rutka (Otolaryngology)
Dr. A. Sahgal (Radiation Oncology)

Dr. G. Sandor (Dentistry)
Dr. A. Slutsky (Medicine)
Dr. D. Stewart (Psychiatry)
Dr. G. Tait (Anaesthesia)
Dr. R. Talwar (Dentistry)
Dr. K.G. terBrugge (Medical Imaging)

**Dr. T. van der Kwast** (Laboratory Medicine and Pathobiology)

Dr. Q. Wan (Physiology)

Dr. I. Weller(Public Health Sciences)Dr. L. White(Medical Imaging)Dr. R. Willinsky(Medical Imaging)

Dr. L. Wilson-Pauwels (Biomedical Communications)

Dr. I. Witterick (Otolaryngology)