As we begin a new year we continue our brand of high quality surgical research. We define success not only through leading research relevant to our subspecialties, but also through bridging the chasm across medical specialties through high impact vehicles like The Lancet and The New England Journal of Medicine. We are focused, more than ever, on connectedness within our department through benchmark initiatives such as Building Bridges Symposia and new approaches to come with video podcasts, enhanced e-communications and a highly engaging research website.

Mohit Bhandari, MD, PhD, FRCSC
Associate Chair, Research

McMaster University, Department of Surgery
Dr Michelle Ghert is an Associate Professor of Surgery in the Division of Orthopaedic Surgery. Following an undergraduate degree at Stanford University, Dr. Ghert obtained her Medical Degree from Vanderbilt University. She completed her Orthopaedic Residency at Duke University and Fellowships in Molecular Cancer Biology at the Samuel Lunenfeld Research Institute and Orthopaedic Oncology at the University of Toronto. Dr. Ghert is the Chair of the Research Committee of the Musculoskeletal Tumor Society and was named Deputy Editor of the UK-based journal *Bone and Joint Research* in March of 2015. In 2013 she became the first female Canadian to be selected for the American-British-Canadian (ABC) Travelling Fellowship (inaugurated in 1948). She is the lead investigator for the PARITY trial which is the first ever multi-centre, multi-national randomized controlled trial in orthopaedic oncology.

Tell us a bit about your research program.

MG: The main focus of my research program is the PARITY (Prophylactic Antibiotic Regimens in Tumor Surgery) trial. PARITY is a large international randomized trial comparing short versus long duration post operative antibiotics in patients that have bone sarcoma surgery of the lower extremity. We now have 35 sites open in 7 countries and we recently obtained our first European hospital ethics approval. PARITY is a very large study that involves a lot of collaboration amongst surgeons worldwide. The reason why this is really important is that the type of tumors we treat are very rare, so each centre only has a relatively small number of patients per year. In order to obtain valid clinical evidence with a large enough sample size our clinical research community needs to collaborate.

What initially garnered your interest in becoming a researcher as well as a clinician?

MG: It struck me early on in my residency that I was interested in researching what I was seeing clinically. However, I realized that in order to effectively be able to answer questions, I would need time, focused time. So I requested and was granted a research year to study cell biology of bone cancers. That year gave me a chance to focus on research and produce some publications, and learn about the grant writing process. It was something that I really enjoyed and it was clear to me that research was a career element that I wanted to pursue going forward. This didn’t mean that I no longer wanted to be a surgeon, but it became clear to me that my career goal was to be a surgeon-scientist.
You mentioned your fellowship, what made you decide to pursue a fellowship in molecular biology?

MG: In cancer research there is a large focus on understanding why cancer occurs and how we can be more effective in treating it. It was my feeling at the time that the answer was going to be on the bench and that studying how cells metastasize and why they replicate uncontrollably, would be the most impactful approach. I was hired here at McMaster to do bench research. I had a lab that started up in 2005. My lab built up to 8 members at one time and was a busy focus of my daily routine. However, I gradually became more and more interested in the true strengths of research at McMaster. I have come to understand that where you are profoundly affects how successful you will be in your research. I didn’t have the support or mentorship in basic science that I received in clinical research. I was trained by excellent scientists and I continue to keep up my knowledge base. But my research focus has done a ‘180’ and is now heavily weighted on clinical research.

You have approximately 75 citations on Pubmed, if you had to choose one which would you say you are most proud of?

MG: The PARITY pilot, as it is the first rigorously designed randomized trial in my field. It is the first such sentinel work that I have done. It is only a pilot study, 10% of the definitive sample size, but to have a large number of surgeons internationally agree to work with me on a collaborative effort was something that I did not know would be possible. Therein lies the level of accomplishment, and even though I have published higher impact studies with respect to impact factor, this is the one that I’m most proud of because it represents a massive team effort and something that is very new and has an impact in my field.


From what you have learned so far in your research career, what advice would you pass on to a new researcher?

MG: Most important is to ensure that you have mentorship that you trust and that has national or international recognition. It is critical to have support behind you when you start your independent research career. The other thing is to be very flexible. If the continuum of your research should change over time, and you wake up one day and you are doing something completely different then when you started, that is ok. As long as you are enjoying what you are doing and you feel like you are making an impact, then the actual research focus is of less significance.

You are currently very busy with PARITY and other projects, what plans do you have for the future?

MG: We are planning to do a modified Delphi process within our field; including an in person meeting at the end of the process to identify the next research question in our field. It is a scientific process that we are using to get to the end point of the research question. We have found from our collaboration focus group that one of the most critical factors that has led surgeons to collaborate on PARITY is the intrigue and the importance of the research question. So if our next research question doesn't have that sort of intrigue or interest then it won’t have the success that PARITY has had. We need to identify the right research question; we want to involve the entire community so that it is not just one study after another from McMaster but collaborative research that can actually originate from the field itself.
The Office of Surgical Research Services is providing educational workshops on research methodology to research personnel, interested faculty, residents, and fellows within the department. The second workshop on “Systematic Reviews and Meta-analysis” took place on December 17, 2015. It was very well received. The workshop highlighted the importance of Systematic Reviews and Meta-analysis covering search strategies, unbiased study selection, data collection, quality assessment, and statistical analysis. The third workshop on “Writing Grant Proposal II” will be planned in the near future.

Dr Richard Whitlock (Cardiac) was featured in the November 4 issue of the Hamilton Spectator for his transcatheter aortic valve implantation (TAVI) surgery and following reunion with 92 year old World War 2 veteran Alex Campbell.

Dr Dan Poenaru (Professor Adjunct, Pediatrics) was awarded the 2015 Surgical Humanitarianism Award of the American College of Surgeons for starting East Africa’s first pediatric surgical fellowship and for educating and training pediatric surgeons in Africa.

Dr Luis Braga (Urology) won second prize for a moderated poster presentation entitled “Risk factors for fistula formation after distal and midshaft tip repair: A comprehensive time to event analysis of 1267 patients” at the 2015 European Society for Paediatric Urology held in Prague, Czech Republic.

Publications September-December 2015

Cardiac Surgery


“The SIRS trial does not support the routine use of methylprednisolone for patients undergoing cardiopulmonary bypass, but does suggest an increased risk of myocardial injury.”

Dr. Richard Whitlock et al

General Surgery


Neurosurgery


Our results suggest similar reoperation rates regardless of irrigation pressure and establish very low pressure as an acceptable, low-cost alternative in the irrigation of open fractures. 

Dr Mohit Bhandari, Dr Brad Petrisor et al

Publications Continued


Orthopaedics


"Surgeon volume was found to have a strong association with procedure selection."

Dr Christian Finley et al


“He was a legend in his own time and his legacy will only increase with the passage of time... In the spirit in which he lived his life, taught his students, and helped shape EBM, we salute Dr David Sackett and wish him a fond farewell.”

Dr Achilles Thoma

Publications Continued


Otolaryngology


Paediatric General Surgery


Plastic Surgery


Publications Continued


Thoracics


Urology


Please note that this list presents only articles fully in print. Articles that are epub’d before print will appear in future issues when their citations are complete.
Building Bridges IV: To Succeed, We Must Often Fail
Wednesday January 27, 2016, University Club, McMaster

Our Associate Chair of Research, Dr Bhandari, invites you to join him at the fourth Building Bridges event in our series this new year. This morning long conference will provide you with an opportunity to interact with some of the top researchers in our Department, to learn from their experience and to inspire you in your research endeavours. Building Bridges is open to faculty, fellows, residents, research staff and medical students working with our surgeons.

Faculty Speakers:

Dr Yaron Shargall: Nobody Remembers An Easy Task Well Done - Embrace Challenge
Dr Michael Gupta: The Balancing Act - We Want To Do It All, But We Simply Can’t!
Dr Peter Lovrics: Lessons Learned Along My Academic Career
Dr Brad Petrisor: I Owe My Greatest Successes To My Biggest Setbacks

Contact Steve Phillips (phills3@mcmaster.ca) to RSVP for the event.

SOURCE Evidence-Based Surgery Workshop
Systematic Review/Meta-Analysis
Wednesday February 10, 2016

This interactive, informal, tutorial style workshop is specially designed for surgeons (both academic and clinical) interested in learning about the concept of systematic review and meta-analysis and applying the concept in research and everyday practice.

This half-day workshop is suitable for surgeons and surgical residents with different levels of expertise. Each participant will be led through a unique, interactive learning experience facilitated by a tutor.

To register for this workshop contact Jacqueline Wilcox (jwilco5@alumni.uwo.ca) by January 31, 2016.

Chair’s Rounds
Dr. Geoffrey Blair: Do Surgical Camps Still Have a Place in Global Surgery?
Wednesday February 24, 2016, Juravisnki Cancer Centre

Dr. Blair is currently the Director of UBC Surgical Undergraduate Education and a past-President of the Canadian Association of Paediatric Surgeons. His varied interests include pediatric thyroid disease, surgical education, and global surgery. Dr. Blair has partnered with Ugandans on a number of occasions over the years, providing surgical care to hundreds of Ugandan children and enhancing opportunities for surgical education and training through ‘Pediatric Surgical Camps’.
Dr Christian Finley’s Canadian Partnership Against Cancer discussion paper was released to the public on November 12, 2015. This report represented a significant amount of work investigating the concept of regionalization in high risk, resource intensive cancer surgery, looking at the distribution of care across the provinces, access to care within a province, and the subsequent differences in length of hospital stay, resection rates and in hospital mortality across the jurisdictions. This exploratory paper discussed the various approaches to regionalization practiced in each province, including the organization of each respective surgical cancer care delivery system, and observed and associations between the outcomes and the approach used in the surgical cancer care system. This resulted in a series of recommendations, that if implemented, will help to reduce the significant variability in patient outcomes between provinces and improve the overall quality of surgical cancer care across Canada. In support of this project launch, Dr Finley was invited to speak on CBC and CTV National news, had write ups in The Spectator and The Kitchener-Waterloo Record (as well as online for CBC and CTV) and the report was presented at a radio station in London, On.

2015 McMaster International Retinopathy of Prematurity Conference

Dr Kourosh Sabri, the conference chair, held the 2015 McMaster International ROP Conference on September 26th and 27th in Toronto in anticipation for the development of national ROP guidelines. This conference attracted international experts on ROP from four different continents. The goals of the conference where to aid in the development of ROP screening guidelines in Canada, to gain global insights into future ROP screening and treatment and to create new international links for future ROP research.
Upcoming Funding Application Deadlines

**CIHR - Team Grant**
Global Alliance for Chronic Diseases Lung Diseases Grant
Amount: $400,000/year up to 5 years
This funding opportunity on Implementation Research on the Primary Prevention of Chronic Lung Diseases in Low and Middle Income Countries (LMICs).
www.cihr-irsc.gc.ca/e/46880.html

**CIHR Project Scheme - 2016 First Live Pilot Competition**
Amount: Up to $750,000/year up to 5 years
The Project Scheme is designed to capture ideas with the greatest potential to advance health-related knowledge, health research, health care, health systems, and/or health outcomes. www.cihr-irsc.gc.ca/e/49079.html

**Kidney Foundation of Canada - KRESCENT New Investigator Award**
Amount: $70,000/year for 3 years
Deadlines: HRS Internal: Feb 1, 2016   Full Application Feb 15, 2016
The KRESCENT program New Investigator Award is awarded to individuals who have clearly demonstrated excellence during their pre-doctoral and post-doctoral training in kidney disease. www.krescent.ca/page.aspx?pid=850

**Canadian Cancer Society Research Institute - Innovation Grants**
Amount: Up to $100,000/year up to 2 years
Innovation Grants have been created to support innovative, creative problem solving in cancer research.

**Canadian Cancer Society Research Institute - Impact Grants**
Amount: Up to $250,000/year up to 5 years
The Impact Grant program is intended to contribute to the scientific idea ‘pipeline’ by supporting significant progression in cancer research programs.

**Brain Canada Multi-Investigator Research Initiative**
Amount: Up to $500,000/year up to 3 years
Deadlines: LOI: Feb 9, 2016
The purpose of the Multi-Investigator Research Initiative (MIRI) grants is to support multidisciplinary teams and to accelerate novel and transformative research that will fundamentally change our understanding of nervous system function and dysfunction.
http://braincanada.ca/en/MIRI

DID WE MISS YOUR RESEARCH RELATED NEWS?
Submissions for the next newsletter will be requested in March 2016.