

# The Surgical Spotlight

ON ALUMNI, FACULTY, RESIDENTS & FRIENDS OF  
THE DEPARTMENT OF SURGERY



EVENTS AND STORIES FROM WINTER 2012

## Medical Students Are Learning Early about Surgery

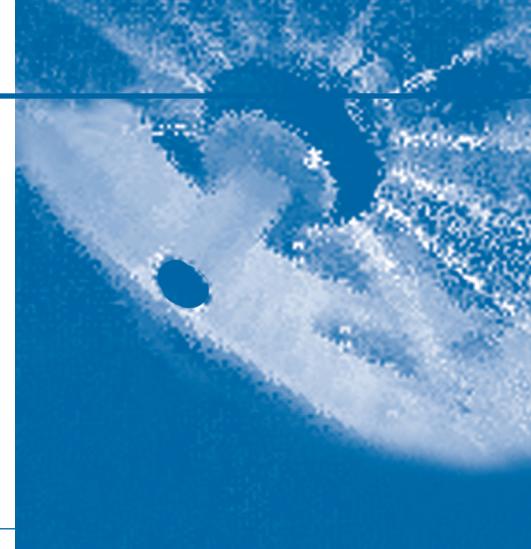


Nada Gawad with her new adopted baby sister, 3 year old Durban South Africa native Maya,

As a small child, **Nada Gawad** was at the University of Toronto daycare centre when her mother was completing a PhD in Optical Engineering. Nada took her first degree at the University of Ottawa. She traveled to Africa as an undergraduate, visiting Uganda, Kenya and Madagascar. She shadowed a doctor in the hospital in Madagascar and observed in the operating room. She was impressed by the idea that “you could fix things! And I am a tactile learner”. For her Honours project she did a clinical study with cardiac surgeon Frazer Rubens at the Ottawa Heart Institute, helped in his office, and shadowed him on clinical rounds.

On entering medical school at the University of Toronto, she shadowed clinicians other than surgeons to broaden her education and solidify her conviction that she should become a surgeon. She participated in the “One Day Matters” in general surgery doing paediatric surgery with Jack Langer once a week and subsequently performed a summer research study with him on surgical wait lists. With the International Federation of Medical Students, she went to Romania for further clinical experience, including thoracic surgery.

She has recently worked with Chairman Jim Rutka, setting up the SEAD (Surgical Exploration and Discovery) program ([www.seadprogram.ca](http://www.seadprogram.ca)). 20 first year students have signed up for the SEAD to observe in one of the surgical specialties. Her needs assessment to see if this was attractive to pre-clerkship students revealed that 85% were interested.



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Nada collaborated with fellow student Konrad Salata in a project to purchase pig skin suturing kits for 280 pre-clerkship students. They recruited 29 surgeons to help teach first and second year students suturing techniques. She got this idea from Skills Lab manager Lisa Satterthwaite. For a DOCH2 (Determinants of Community Health 2) project, she is working with Teodor Grantcharov at St. Michael's on a project to introduce laparoscopic surgery to second year students.



Nada Gawad

information can be found on <http://www.seadprogram.ca/index.php>). Nada hopes that this will become part of the formal curriculum for the medical students; she has been encouraged by pre-clerkship director Martin Schrieber. She is also working with Darlene Fenech on the curriculum for the Introduction to Surgery course. She performed a needs assessment with 500 students and a focus group with 10 students for her undergraduate education report to George Christakis.

Outside of the medical world, Nada enjoys Hip Hop Culture Shock Shop, and touch or flag football. She plays with the Meds football team in the city league. She has competed in hip hop contests and shows, including one in Los Angeles.

#### *Martin McKneally*

**Michael Bond** is a third year medical student, currently enjoying his elective surgical rotation on orthopaedic surgery. He has been interested in anatomy since highschool, when an inspiring biology teacher prompted him to think about structure and function. His interest was heightened by a kinesiology course in grade 12. As a Health Science major at McMaster, he focused on anatomy with a view toward entering medical school. He comes from a family of engineers and feels this may have oriented him toward his career goal in orthopaedic surgery. He loved learning in the clinic and in the operating room on general surgery, neurosurgery and orthopaedic surgery.



Michael Bond

Michael has worked with Women's College Hospital rheumatologist and chief of Medicine Gillian Hawker on research projects during two summers and intermittently during the school year. He will do electives next year to help decide where to pursue his goal of training in academic orthopaedic surgery. He hopes to do a graduate degree, probably in epidemiology. His role models have been surgeons and physicians who are excellent in their communications with patients, with the operating room staff and in the clinics. He hopes to become an academic surgeon with a focus in epidemiology and teaching. He feels that the surgical teaching that he has received on morning rounds, in the operating room, and in the clinics has been unique and inspiring. He is particularly complimentary about the near-peer teaching provided by surgical residents. He has been active in singing as an organizer and lead in the choir of the medical school musical Daffydlil.

*M.M.*

# Chair's Column: Focus on Medical Student Education in Surgery



James Rutka

It is timely to inform all of you of the upcoming accreditation process of the Medical School at the University of Toronto. Medical schools in North America undergo an accreditation process every eight years. This process is conducted by a group of peers and medical education experts who systematically review every facet of the MD program to determine whether the quality of education meets common standards across North America. In Canada, MD programs are accredited jointly by the Committee on Accreditation of Canadian Medical Schools (CACMS), and the Liaison Committee on Medical Education (LCME). In preparation for accreditation, we have submitted several documents which provide the requisite information on how we teach the surgical curriculum to our medical students at the University of Toronto. The accreditation process itself will take place May 13-16, 2012.

I think you would all agree that teaching medical students about surgery is one of our most important opportunities. During this past academic year, we have paid particular attention to the wants and needs of our medical students. One of my first tasks as Chair was appointing a new Director and Coordinator of Undergraduate Medical Education in the Department. After extensive search processes, I was very pleased to appoint George Christakis, Division of Cardiac Surgery, Sunnybrook Health Sciences Centre as Director, and Shibu Thomas as Coordinator. Together, George and Shibu have worked extremely hard to improve the surgical curriculum for the medical students, and to implement innovative changes that will serve as a model for all medical schools across North America. In particular, the “crash course” for clinical clerks has been re-designed so as to maximize learning of the core surgical materials in

a concentrated and interactive format.

But we have done much more. Recently, Carol-Anne Moulton, General Surgery UHN, and Ron Levine, Director Post-graduate Medical Education, held a “Life in Surgery” evening event at the Faculty Club for the medical students in all years to learn about how to achieve family and work balance in a career in surgery. For this event, many of the participating faculty brought their children to speak to the medical students about what it was like growing up in the home of a surgeon. In February, we held a “Suturing Workshop” for medical students in which years 1 and 2 students purchased suture kits, subsidized in part by the Department of Surgery, and learned the art and practice of tying surgical knots, and closing surgical wounds on a simulation model. Special thanks are given to medical students, Nada Gawad and Konrad Salata, for their help in organizing this workshop, and to the many faculty who participated in making it so successful. John Wedge, former



Suturing Workshop

Chair of the Department of Surgery, helped tremendously with the workshop, and had this to say: “... I thought this a vitally important opportunity to demonstrate our interest in students in their formative years - to put a positive light on surgery as a career option. The current ethos from most medical educators does not typically paint surgery as an attractive career so it is critical that we do whatever possible to counteract this trend. Kudos to the Department in initiating this program! The determination and ability to learn quickly of all of the students with whom I interacted was very impressive and encouraging for me.”

Most of the Divisions have been attending the Student Surgical Skills Development (S3D) Group evenings in which representatives of the Divisions attend the dinner or lunch events, and speak to the medical students about a career as a surgical subspecialist. I would like to thank Sarah Beech, medical student at UofT, who has helped us organize these seminars. Sarah has also been involved

in providing exposure to medical students wishing to practice basic surgical skills on model systems.

This summer we will be assisting with the Surgery Exploration and Discovery (SEAD) course which will provide medical students with an opportunity to learn more about the careers of the different subspecialties in surgery. Special thanks are once again given to Nada Gawad who has organized this course for the students with our support.

Finally, I have begun a “Breakfast with the Chairman” initiative in which I meet with the medical students at the Banting Institute over breakfast to provide information to them about career paths in surgery, and to answer their many questions. It has been a distinct pleasure for me to see the various new offerings we are supporting in the Department of Surgery for our medical students. Our strong hope is that we can encourage many more of them to contemplate lives and careers in surgery upon graduation. To this end, over the next 5 years, we will be tracking the courses of our graduating medical students to see if we have made a difference in this regard.

*James T Rutka,  
RS McLaughlin Professor and Chair*

## Changing the Guard in Undergraduate Medical Education



Carmela Calorendi with Ron Kodama

Sinai Hospital. We take this opportunity to thank David sincerely for his tireless efforts and devotion to undergraduate medical education, and for putting into place a new curriculum for our students. Following a city-wide search

Having served as Director of Undergraduate Medical Education (UME) in the Department of Surgery for 7 years, David Backstein has stepped down from this position to focus on his academic position as Head of the Division of Orthopaedics at Mount

this summer, I am pleased to report to you that George Christakis has been appointed as the new Director of UME. George is Professor of Cardiac Surgery with a long standing devotion to undergraduate education.

Assisting George Christakis with the UME program will be pre-clerkship coordinator, Ron Kodama, and newly appointed UME Coordinator, Shibu Thomas. Shibu is following in the footsteps of Carmela Calorendi who served capably in this role for 22 years. We would like to thank Carmela sincerely for her many years of service to the Department, and for assisting with the education of countless hundreds of medical students over those years.

*Jim Rutka*

## George Christakis

DIRECTOR UNDERGRADUATE SURGICAL EDUCATION



George Christakis

George Christakis has been interested in surgery and surgical education since medical school. He received all of his medical and surgical training at the University of Toronto. Clerkship had the biggest impact on him, particularly exposure to surgeons Ulo Ambus, Bryce Taylor and John Palmer. He was inspired by the broad knowledge and critical thinking of these insightful role models.

George has always liked teaching undergraduates. He has written the learning objectives for the clerks on surgery, and participated in problem-based learning exercises with the first year students since 1990. He was the clerk coordinator at Sunnybrook, which provided excellent background for his current position. He likes to read history, and is currently reading “A World without Islam” by Graham Fowler. His children, Theodore, 13, Nicole, 12 and wife Monique travel, camp, and canoe together during vacation time.

*MM*

# A message from George

## OUR UNDERGRAD STUDENTS HAVE CHANGED: HAVE WE?

Those who know me know I don't mince words. You'll probably read some seemingly sacrilegious statements here. But please bear with me, I have a point. In fact, this is a result of a personal introspective exercise that made me reflect, ponder and then become charged with energy to institute positive change. I hope that for at least a few of you this will be a reason to look at things from a different perspective.

It has been a few months since I've taken on this role. I am daily reminded of, humbled, and applaud the efforts and insight that my predecessor, David Backstein and his team brought to the Department of Surgery education portfolio.

I know also, that there are some challenges and issues and shortcomings in the way we have been doing things. While the upcoming accreditation in May 2012 is a very important milestone for us, I see change as far more important as we seek to provide our students with an educational experience that is compelling, engaging and on par with the best in the world. The recent Independent Student Analysis (ISA) (<http://www.md.utoronto.ca/Assets/FacMed+Digital+Assets/ume/Accreditation/ISAfinal.pdf?method=1>) findings are just manifestations of an underlying malaise in Undergraduate Education in the Department of Surgery. The following are some of my thoughts (in the form of hopefully, thought-provoking questions) on this issue that I'd like to share with you.

Are we as University-appointed faculty seriously thinking about delivering quality education?

Is the level of interaction that we provide our undergraduate students on par with one that we (or our children) would be happy receiving?

Technology has changed, society has changed, and paradigms have shifted. Have our teaching methods effectively changed for the better?

Are we turning away some of the brightest young minds from a career in surgery by our perceived aloofness to clerks? This may be perception, but that is what may be often taken as reality.

Shouldn't education in all its facets be the *raison d'être* of the University and the Department of Surgery in general and Undergraduate Education in particular?

In the upcoming issues of Surgical Spotlight, I hope to share with you a few ideas and policy changes - some mine, many from my colleagues in Surgery and a few mandated by the University UME.

This is not change that can be made by a few people, in weeks or months. It requires passion, perseverance, and steadfast purpose. I seek your assistance, encouragement, advice, support and best wishes as we embark on this exciting, important, and monumental endeavour - one little and progressive step at a time. Thank you for your contributions to undergraduate surgical education.

### T-RES FORM

At the Clerkship Committee Meeting, chaired by Clerkship Director Undergraduate Medical Education Anita Rachlis, one of the points that was stressed at that meeting was the importance of the T-Res form being completed by our clerks.

I find this process to be very helpful as it gives us a checklist of the encounters and procedures that the clerks need to have been exposed to as part of their surgery rotation. If you are the "final preceptor," i.e. in the third surgical rotation of the 8 week period, we must have a plan to help students fulfill all the goals set out on the checklist, in the rare cases where a student has not had exposure to one of the clinical goals.

At the time of your clerk's ward evaluation, please remember to ask them about this form (also referred to as Form 62 or 064)? Clerks have already been instructed to bring an updated form with them to their mid-term evaluation.

For your reference, T-Res forms can be viewed at: <https://www.portal.utoronto.ca>.

Thank you,

*George Christakis  
Director, Undergraduate Education  
Department of Surgery, Faculty of Medicine  
University of Toronto*

# Shibu Thomas

## COORDINATOR UNDERGRADUATE SURGICAL EDUCATION



Shibu Thomas

Undergraduate Surgical Education Coordinator Shibu Thomas, working with George Christakis, has taken a close look at the experience of our students and has made several useful recommendations. The Crash course, which helps assure that students enter their clinical rotation with sufficient background information "was excellent, but students

couldn't maintain their focus when the sessions ran from 8 AM to 6 PM". Shibu and George shortened the program to four days, running from 9 until 5. The fifth day is spent at the Li Ka Shing simulation centre in a hands-on trauma course, coordinated by Jameel Ali and his colleagues at St. Michael's Hospital. This has been highly evaluated by the students. The next seven weeks are spent in 3 sub-rotations on surgical specialties, including one in general surgery.

All of the students are given an initial orientation on arrival and a handbook prepared by Shibu. They report that some of the rotations are "heavy on SCUT work (service component unrelated to training)", and they feel that they are not really perceived as part of the surgical team. This is an important insight that requires remediation. At the mid-point of their rotation, there is a centralized lecture day with 2 hours of pediatric surgery, 2 hours of surgical radiology and one to three hours of palliative care. They also participate in an ungraded practice National Board of Medical Examiners exercise. At the end of the rotation, the students take the National Board of Medical Examiner's test for credit. Their grade is based on an oral exam, the NBME exam and the ward evaluation, one third each. They are also required to bring their TRes, a log of their encounters and procedures, which can be entered from a portable device such as an i-phone or Blackberry.

Shibu was born in India, where his father was an attaché who traveled widely, giving Shibu a very varied life experience. He received a Master's Degree in English at Bangalore and has worked as a copywriter and in administrative positions in healthcare on the wards and in the ICU within the

University Health Network. He served as administrative coordinator for Plastic Surgery before taking his present position. He is enthused about his undergraduate responsibilities. He is a skilled medical writer who has prepared articles for U Toronto Medicine and other publications.

M.M.



Crash Course in Surgery Nov. 11-3

### TOP 10 POINTS FOR FACULTY IN THE DEPARTMENT OF SURGERY TO REMEMBER ABOUT UNDERGRADUATE MEDICAL EDUCATION

1. *Know the goals and objectives of the surgery program*
2. *Know the objectives of the course in surgery you are teaching*
3. *Be familiar with key policies about student injury (e.g. Needlestick, student mistreatment)*
4. *Get involved as a Program Based Learning tutor, mentor or scholar*
5. *Take part in faculty development in the Department of surgery*
6. *Watch your students interview and examine patients in the clinic*
7. *Give students feedback regularly*
8. *Be supportive and positive as role models*
9. *Help students understand what careers in surgery are about*
10. *Complete your student evaluations in a timely manner*

## SURGERY



Use this sheet to manually record your patient encounters/procedures. Then transfer the data to T-Res at [www.t-res.net](http://www.t-res.net) at a more convenient time.

ENCOUNTERS	Goal	Real
acute abdomen	1	R
post op fever	1	R
post op electrolyte management	1	R
post op urine output management	1	R
trauma	1	R
tumour/ malignancy	1	R
wound care	1	R
		7

Patient Information		
Date	Real?	Notes

PROCEDURES	Goal	Real	Level of Involvem.
casting/splinting	1		C
chest tube	1		A
laparotomy	1	R	B
suturing/knot tying	1	R	B
wound closure/dressing	1	R	B
			5

Patient Information			
Date	Real?	Level	Notes

### Student

1. Please input all entries into T-Res system on a regular basis.
2. Mid Rotation - Please bring an updated T-Res Report 062 to your mid rotation meeting
3. End Rotation - Please send an updated T-Res Report 064 to the Course Director.

### Legend

- Goal - Number of Encounters/Procedures  
 Real - "R" - must be a real patient  
 Level of Involvement (Minimum)  
 A. Observe procedure  
 B. Perform with assistance or assist someone else  
 C. Perform independently

T-Res - Manual Logging Sheet 2011-2012 – Surgery

## I. T-RES

T-Res is a mandatory component of the course and it lists the essential encounters and procedures that every clerk is expected to complete during their rotation. See image (Fig. 1) to see the manual logging sheet. The progress of a clerk's T-Res compliance should be monitored at the time of the Midterm subrotation evaluation – see below.

### 2. Midterm subrotation evaluation form

This is used to provide formative feedback to the student at the midpoint of *every* subrotation.

### 3. MedSIS timeline for marks

Four (4) weeks after rotation for components, six (6) weeks for final marks. As per UME policy, component marks need to be published for students 4 weeks after their rotation. This means all evaluations forms need to be completed on MedSIS before this milestone. *Optimally, all evaluations should be completed within one week of a clerk's subrotation.*

### 4. UME teacher manual

This is a very useful resource and is available online at <http://www.md.utoronto.ca/handbook.htm>



Adam Rosanally



Sindu Govindapillai

Congratulations to our Year 3 students Adam Rosanally (Rotation E, Peters Boyd Academy) and Sindu Govindapillai (Rotation D, Wightman-Berris Academy) who scored 94% and 90% respectively, on the National Board of Examiners (NBME) Surgery examination.

A truly outstanding effort. Both Adam and Sindu need to be commended for the attitude, hard work, dedication and aptitude that these scores reflect.

Good luck with your studies and continued success in your future endeavours.

*Shibu Thomas*

# Best Practice in all of Surgery



from left to right Robin McLeod & Emily Pearsall

Robin McLeod has taken on the responsibility of Vice Chair of the Department of Surgery, Quality and Performance. Robin currently leads the Best Practice in General Surgery (BPIGS) program and Jim Rutka has asked her to expand this quality initiative across all the divisions in the department. The Best

Practice in General Surgery program was initiated in 2006 with the goal of standardizing care based on best evidence across all of the adult teaching hospitals. The Steering Group has representatives from all of the fully and partially affiliated adult hospitals. With the support of all of the general surgeons, they have developed and implemented guidelines on Surgical Site Infections, Thromboprophylaxis, Mechanical Bowel Preparation and Management of Intra-abdominal Infection. Their current focus is on developing, in conjunction with anaesthesia, nursing and allied healthcare representatives, an "Enhanced Recovery after Surgery" Guideline.

An important aspect of the program is the involvement of both residents and medical students. Prior to developing the guidelines, audits had been performed to assess whether a gap in care exists. A second audit was then conducted after guideline implementation to determine if there had been an improvement in care. Not surprisingly, the group has been able to identify significant gaps in care. For example, in an audit of 350 patients who had intra-abdominal sepsis, 34 different antibiotic combinations were prescribed and 40% of the patients had prolonged courses of antibiotics of more than 7 days.

A unique feature of BPIGS is the collaborations that have been developed across hospitals as well as specialties. For

instance, the Intra-abdominal Infection guideline has been developed in collaboration with the Toronto Antimicrobial Stewardship Corridor, and a multidisciplinary listserv is planned to familiarize surgeons, physicians and residents with the recommendations.

The BPIGS group has been able to show that they have been able to improve care. For instance, as shown in Figure 1, the appropriate administration of pre-operative antibiotics increased following the implementation of the Surgical Site Infections Guideline. As a result, there has been good buy - in from the CEOs of all the hospitals. The work of BPIGS helps CEO's fulfill the institutional requirements of the provincial "Excellent Care for All" mandate.

Jim Rutka hopes to see the Best Practice in General Surgery program expanded across the department to develop protocols, guidelines, and centers of excellence. Already there are examples where services have been consolidated to improve care such as the Vascular Surgery Program. The Trauma Program, which until recently had been comprised of two fairly independent sites, is also in the midst of developing common protocols and sharing fellows. The Bariatric Program is a coordinated university program situated at 4 sites. Developing a department quality improvement initiative will be one of the priorities of the Strategic Planning process. According to Robin "there is a great opportunity for our department but it will take surgeon buy -in as well as champions in each division. Audit will be an important component to show success, which in turn will help to attain government and other external funding to support the initiative."

Emily Pearsall, a PhD candidate in Knowledge Translation, is the coordinator for the Department's Quality and Performance program. The members of the Steering Committee include Mary-Anne Aarts, Darlene Fenech, David Lindsay, Avery Nathens, Allan Okrainec, Lorne Rotstein, Peter Stotland, and Alice Wei. More information about Best Practice in General Surgery can be found at [www.bpis.ca](http://www.bpis.ca).

*M.M*

# Sabermetrics and Surgical Outcomes



Justin Dimick

research is conducted at the University of Michigan's Centre for Healthcare Outcomes and Policy.

At December's University Rounds on Surgical Epidemiology and Statistics, Justin used a picture of the University of Michigan football stadium filled with over a 100,000 people to drive home the point that there over 100,000 deaths each year following surgery in the United States. He asked our audience "if surgical performance follows a bell-shaped curve, which of you is in the lower half of the curve?" He asks this question whenever he speaks; it universally elicits a negative response. Like the 95% of teenage drivers who consider themselves to be in the top 5% in driving performance, we tend to overestimate ourselves. At the current time, there is great interest and attention focused on the outcomes of surgery.

The National Surgical Quality Improvement Program (NSQIP) - the American College of Surgeons Program (Surgical Spotlight, Winter 2010, pp. 14-15 or [http://www.surgicalspotlight.ca/Article.aspx?ver=Winter\\_2010&f=KoCaterpillarGraphs](http://www.surgicalspotlight.ca/Article.aspx?ver=Winter_2010&f=KoCaterpillarGraphs)) on quality improvement, teaches that "the road to quality improvement is paved with DATA." Justin used the popular movie "Money Ball" to illustrate how important is to use the right data to improve outcome. The manager of the Oakland Athletics, Billy Beane (played by Brad Pitt) was able to bring his team into the playoffs regularly, and establish

an amazing record with the lowest budget in the major leagues ~ 40 million dollars per year. He outmanaged the New York Yankees despite their annual budget of 226 million dollars. Beane relied on sabermetrics – the mathematical and statistical analysis of baseball records originated by Bill James. James recognized that the ability to get on base was what scored runs and won games, not the usual metrics used to choose and recruit players, such as running speed, fielding dexterity, and batting average. Similarly, the usual metrics for measuring or predicting surgical outcomes may not be using the right data. The commonly accepted formula is: Severity of illness + quality of care + random error = outcome.

But severity of illness as a risk factor is overemphasized in Justin's view. Though predictive of complications, it is the ability to rescue from complications, not their incidence, that determines hospital mortality. That is why teams, rather than individual surgeons, account for lower mortality at large volume hospitals. The individual surgeon proved to be an important factor in only a few operations, like carotid endarterectomy. The team proved more influential in most operations like pancreatectomy. These findings were recently published in a landmark article in the New England Journal of Medicine. They clarify and emphasize the critical importance of the quality of care.

A second helpful contribution to improving outcomes was a simplification of the burdensome documentation process of care. In a recent analysis of the NISQIP data, Dimick and his colleagues found that they could simplify their data collection, as five variables gave as robust a correlation with outcome as the 20 variables currently collected in the NISQIP program.

Alice Wei asked about analyzing the rescue process. Justin responded that this is a complex component which is currently being analyzed using qualitative and quantitative methods. For example, what is the impact on outcome of adding of a rapid response team? David Latter asked whether mortality was overused. It can be accurate, but impoverished in that it does not address some of the significant goals of surgery. Dimick responded that mortality had proven to be very unhelpful in analysis in bariatric surgery, as there were only two

deaths in 6000 analyzed cases. The complication rate is far more significant. Gail Darling asked about the analysis of length of stay, which proved to be much greater following esophagectomy in high volume hospitals. This was a reflection of the rescue process at low volume hospitals, which probably led to earlier deaths with less prolonged rescue procedures.

Both Dimick in Michigan and David Urbach in Ontario are analyzing 'what goes on in the operating room' as a factor in outcome. Perioperative antibiotics and other nonsurgical factors have been well analyzed. Technical proficiency and innate skill are probably high leverage components, but these are inadequately studied. The Michigan group is using the skills lab to assess innate surgical skill and videotaping operating room cases to assess technical proficiency. They use an OSATS scale (developed by Richard Reznick and his colleagues) to assess skill of the operating room team. They find that the details of the operation that are the usual metrics, such as stapled versus hand-sewn anastomoses have not proven to be potent factors.

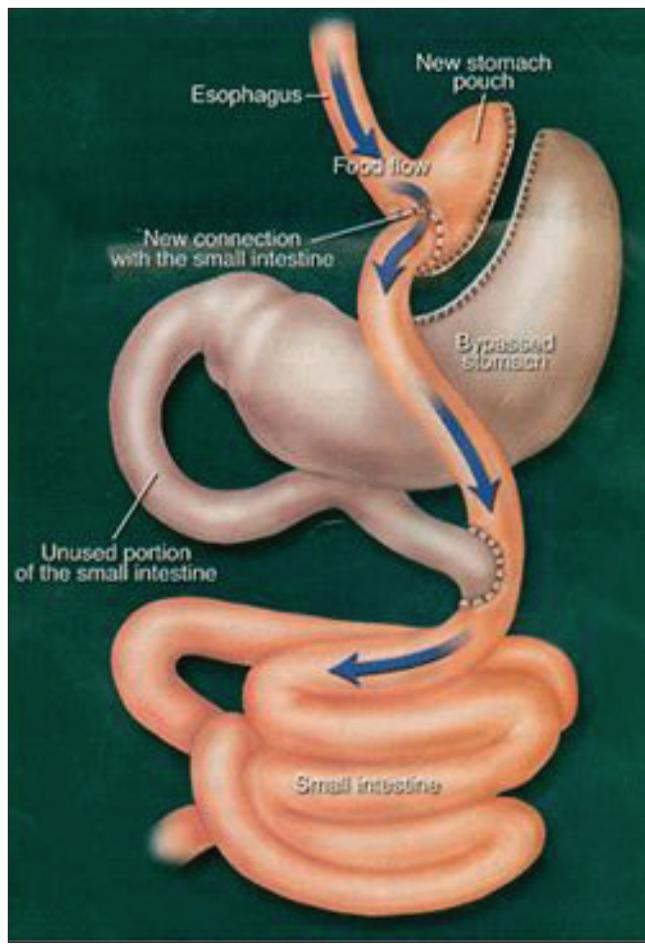
#### M.M.

1. Ghaferi, A., John D. Birkmeyer, J., Dimick, J. *Variation in Hospital Mortality Associated with Inpatient Surgery*; N Engl J Med 2009; 361:1368-1375

## An Intestinal Operation Can Cure Diabetes

A laparoscopic Roux-y operation cures diabetes in 70-85% of obese patients. "Cure" means a normal hemoglobin A1C and no medications, with normal glycemic control.

Working with a team of nurse practitioners, social workers, psychiatrists, internists and dietitians, surgeons in Toronto have been developing an integrated bariatric surgery program that is having remarkable success in controlling diabetes. Patient access to the group comes through the Ontario Bariatric Network, a web-based referral system. The typical patient has a body mass index (weight in kilograms divided by height in meters



Gastric Bypass

squared) of 40 or higher. Only 20% are men, a self-selection bias. Patients have various co-morbid conditions in addition to diabetes- many have sleep apnea, hypertension, various musculo-skeletal syndromes, and psychological troubles including depression and physical abuse.

Patients are referred to the Bariatric network through their family doctor. They see one of the nurse practitioners first and then attend a group education seminar. They then undergo sleep studies and are screened metabolically for compliance with smoking cessation. The patients see the surgeon last after thorough screening and conditioning by the bariatric team. The operation of choice is the Roux-y bypass. Though it is done widely in the community, gastric banding is not part of the practice, and vertical sleeve gastrectomy is used in only 5% of patients. There is an 85% success rate in the early experience. The program is intended to provide surgical care for up to 400 patients per year. The surgeons are careful to stay off social networks, as there is considerable



Todd Penner

exchange of detailed information among patients who are seeking bariatric surgery.

“Sometimes consumerism and vanity clash with fidelity to the values of our profession. Much of the information that is exchanged is too good to be true or misleading. ‘I want a 34 French bougie sleeve resection’ is a challenging way to start a conversation.”

Todd Penner describes the dramatic change seen in patients following surgery. “They come the post-op clinic with new clothes, their hair redone, new dental work and they can’t stop smiling. The patient who came in on Metformin and 100 units of insulin is off medications in 5 days with normal glycemic indexes. The metabolic effects are absolutely dramatic and not strictly related to weight loss. Obese patients are stigmatized in society and are often desperate for relief from their social discomfort. Healthcare personnel were initially participating in this stigmatization. The ‘you did it to yourself’ bias is finally going away as the program advances.”

Our surgery is resource intensive, as we cost the hospital \$3-4,000 per case for staples and instruments. Bariatric surgery is volume funded, so the Ministry of Health has an important controlling effect on practice through the hospital CEOs. There are advocacy groups that also influence practice.

Todd describes himself as a common operations general surgeon and a teacher rather than a researcher. He is proud of the SAGES - accredited fellowships the group has established, allowing training of three surgeons per year. “We have a great simulation lab here at Toronto Western Hospital and we are creating a Canadian cadre of bariatric surgeons.”

Todd has won many teaching awards including the Ross Fleming and Frank Mills Award. He is currently reading Physician-ethicist Carl Elliott’s ‘White Coat, Black Hat’, a description of bodily enhancement through surgery.

With his wife Shelley, a fitness model, nurse and mother of two, Todd is very active in running. They have both completed the Chicago, New York, San Francisco, Ottawa and Toronto marathons.

Allan Okrainec completed a minimally invasive surgery fellowship in Montreal. Tim Jackson did his in Boston and David Urbach at Portland, Oregon. Todd Penner’s fellowship was with Lloyd Smith in Toronto. All of the surgeons were locally mentored by John Hagen at the Finch site of the Humber River Regional Centre. “John mentored us for the first 10-20 cases. We went up to his operating room 4-5 times, then he came down, then we worked together in pairs on easier cases, then moved on to the harder ones. Males in general are much more challenging to do than females, as female fat is deposited outside the fascia. Men put it inside. With thin arms and legs, they have massive abdominal and retroperitoneal fat. They need the surgery more for the metabolic effect, but the driver of cosmesis is not as strong in men. It is a good ethical issue as we could help men more metabolically. The surgery is exponentially harder to do in men. The liver, especially the left lateral segment is massive. We shrank their livers on Optifast, which makes 25 to 50% of the liver go away.”

M.M.

## Commentary on Bariatric Surgery



John Hagen

“We do not know why men are shaped like apples and women are shaped like pears, but the intra-abdominal fat distribution in obese men makes bariatric surgery very challenging. The reason that the operation works metabolically may be related to the delivery of undigested food into the small bowel. The intra-abdominal fat is reduced pre-operatively by having the patient take a 900 calorie diet of Optifast, five packages per day -high protein, low fat, low carbohydrate and appropriate vitamins.

The liver is the first place to lose weight, then visceral fat in the omentum, retro-peritoneum and mesentery. The Optifast technique is being used for facilitating other intra-abdominal surgery than the gastric bypass. For example, it is currently used for colon cancer surgery."

There are four bariatric programs in Ontario—one in Ottawa, one in Guelph, one in Hamilton and one in Toronto. The Toronto program is comprised of the Humber River Hospital, St. Joseph's, Toronto East General Hospital and Toronto Western. Residents and fellows rotate at the Humber Hospital as part of the general surgery program. The cases are expensive in that a lot of staples are used, but the funding is volume-based on a special budget from the Ministry of Health. The cost of the operation is recouped in three years from the cost-savings for drugs that the patients no longer need for their diabetes, hypertension and hypercholesterolemia.

Although we quote a 30 day mortality of 1 in 200, across Ontario the mortality rate is less than 1 in 1000, which is similar to the mortality rate of laparoscopic cholecystectomy. Patients can develop complications including internal hernias and malabsorption, so they are required to take certain medications for life, including iron, calcium, thiamine, folic, B12 and vitamin K. If they don't agree that they will take these for life, they are not given an operation."

The future for this form of surgery looks like one of increasing demand and increasing expansion. [the day of this interview, John was going to Sick Kids Hospital to help the surgeons perform bariatric surgery on an obese child.] "Success will come as the general populous becomes more aware of the success of the operation. There are estimated to be 160,000 people in Ontario with the body mass index of greater than 40, the threshold for surgery. We do 2,700 cases a year."

M.M.

## Prizes and Progress in Urology

During this past year, Michael Jewett received three prestigious awards: The American Urological Association's Distinguished Contributions Award for lifelong contributions in urologic oncology, the CUA Award which is an infrequently presented lifetime contribution award from the Canadian Urological

Association, and the Medal of the Society of Urological Oncology, a North American multidisciplinary group. All were received within the same five week period!



Michael Jewett

In answer to the question: What's new in Urology? Michael described a recent visit of Professor Andreas Melzer, the Director of the Institute for Medical Science and Technology in Dundee, Scotland (for a virtual tour <http://imsat.org/virtualtour.htm>). Work going on in the Institute exemplifies innovations that will change Urology. "Meltzer is studying high intensity focused ultrasound (HIFU) thermal ablation using MR guidance for prostate and kidney cancer.. He has invented a robot to perform more precise biopsies during MRI imaging. He has perfected a technique of embalming that keeps cadavers sufficiently flexible that they can be subjected to laparoscopic and other operations with high fidelity to the texture of living human tissue. They are ideal subjects for developing new technology as well as for teaching. Meltzer spoke at TECHNA, the new UHN Research Institute.

The field of urology is advancing rapidly. Neil Fleishner and his colleagues are biobanking urine and blood samples on every cancer patient treated in the urologic oncology program. This can be correlated with the natural history of their cancers and with the genome of the tumors, which have been preserved frozen as has every tumor resected at the UHN for the past six years."

Michael's practice has evolved into oncology exclusively, as our University urology practice is now compartmentalized by mission. "Each of the urologic services at the various university affiliated hospitals has a 30%

platform of general urology and a 70% focus on particular areas of expertise. St. Michael's Hospital specializes in stones, Toronto Western on neuro-oncology (for example stimulation of the bladder), and Mount Sinai Hospital on Infertility and Sexual Dysfunction.

Michael's focus is on kidney cancer, testicular cancer with retroperitoneal node dissection (RPLND) and cystectomies for bladder cancer. Michael holds two chairs in kidney cancer which makes it possible for him to support two post-doctoral students, three research coordinators, as well as fellows and a large research program. His wife, Brenda Gallie, the distinguished ophthalmologist, geneticist and cancer researcher, has worked with him to develop apps for patients in the urologic oncology program that allow them to record and access their records at the point of care. Their doctors receive an autofax of the clinic notes from their visit to the urologic oncology clinic that arrives by the time they reach their home. Sunnybrook has developed a portal, which patients can access to print their records and laboratory results. These are remarkable advances in patient centered care.

M.M.

## Advancing the Science of Burn Care



Marc Jeschke consults with a remote burn patient via the wonders of telemedicine

by liposuction to reduce scarring. He also uses silicone sheets, lasers, cortisone injections and topical cortisone applications, as well as 5 FU to reduce scarring. He showed me pictures of a patient severely deformed by keloid for-

Hypertrophic scarring in burn patients is a problem that is treated with pressure garments worn for as long as two years. They are measured and refitted every three to four months. Massage is also used up six or seven times a day by physiotherapists. Marc Jeschke uses stem cells from abdominal fat obtained

mation over the face who was treated by radical excision, advancement of skin flaps and injection of stem cells into the wound. The stem cells follow epigenetic factors in the surrounding tissues to differentiate into the appropriate cell line. The cosmetic result was excellent.

In 1994, Marc Jeschke completed medical school and his thesis summa cum laude in Tübingen, Germany. He completed a research Fellowship from 1996-1999 with the University Texas Medical Branch and Shriners Hospital for Children. During this time he completed his Masters of Medical Science. He returned to Germany, to the Department of Surgery at the University of Regensburg where received his surgical training and was awarded the habilitation (PhD) in Experimental Surgery in 2001. He returned to the University Texas Medical Branch and Shriners Hospital for Children in 2004 as Attending Surgeon and Coordinator of Research.

Furthering his interest in burn and critical care, Marc undertook a clinical fellowship from August 2005 to June 2006 as the Burn and Critical Care Fellow at the University Texas Medical Branch and Shriners Hospital for Children, the only program to be certified by ACMG.

In May 2010, Marc was appointed Director of the Ross Tilley Burn Centre at Sunnybrook Health Science Centre and Surgeon -Scientist in the Division of Plastic and Reconstructive Surgery.

Marc has been caring for burn patients and conducting research in the field of burns for nearly 20 years and in that time has published more than 180 peer-reviewed articles and has authored several books and chapters on burn care. He was continuously funded as the Principal Investigator since 2000 from the German Research Council, the National Institutes of Health, and Shriners Hospital for Children Foundation.

He has mentored and trained more than 40 PhD, MD, and other graduate students in the field of burn care and burn-related research.

The Ross Tilley Burn Centre has its own operating room and strong support from Sunnybrook Health Sciences Centre, but the novel legislative requirement that every burn in the province can be admitted to a burn centre results in a lot of patients needing primary burn operations. "It is hard to do reconstructive or other cases when you are treating so many burns." Marc and his team collect tissue for research from every operation under REB approval.

#### ROSS TILLEY BURN CENTRE RECEIVES ABS CERTIFICATION

The Ross Tilley Burn Centre, Division of Plastic and Reconstructive Surgery at the Sunnybrook Health Sciences Centre has been certified as an adult burn centre after a site visit in June 2011. Toronto now becomes the sole designated certified burn centre sanctioned by the American Board of Surgery in all of Canada. Special thanks to Marc Jeschke and his team for this accomplishment.

Marc has three main research foci. One is to create skin from umbilical cord and amniotic membrane cells. The research team includes laboratory staff and an engineer. "The most difficult part of this quest is getting the matrix for the cells. Integra, a commercial matrix material based on John Burke's work in Boston is a silicone bandage on bovine collagen. Integra is an excellent bioengineered device that helps burn surgeons treat delicate areas, but it is extremely expensive. At RTBC we use it for the face and hands, but we cannot justify the expense to use it on extensive body burns. The silicone is peeled off after the Integra bandage has been applied for 2-3 weeks and a thin autograft is applied to the Integra base."

The second research theme examines the effect of stress on the endoplasmic reticulum and mitochondria using a human liver model. A paper on this work is in press in the Annals of Surgery. The third theme is treatment of insulin resistance. It is unclear whether it is glucose or other factors such as catecholamines induced by glucose that cause resistance. Marc is studying the use of insulin and metformin effects on tissues and on infection with his colleagues Alison Cheung, PhD clinical research

manager, and Rachael Harrison, PhD, lab manager. He has not yet had surgeon-scientists in the program, but has two current fellows, one from Spain and one from Bahrain, and several PhD and Masters' Degree students.

*M.M.*

## ALUMNI PAGE

### Boundless Possibilities

#### BOUNDLESS POTENTIAL UOFT'S NEW CAMPAIGN



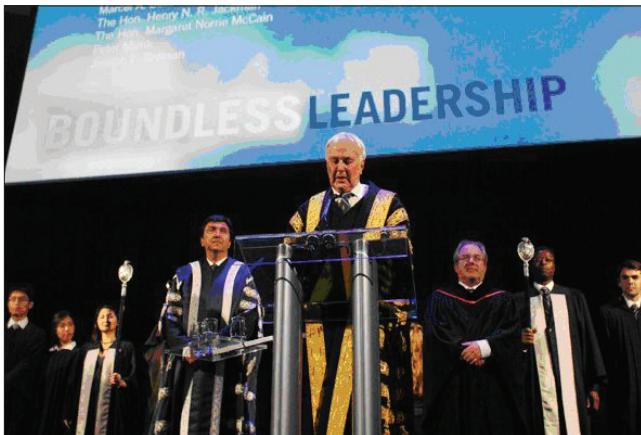
President David Naylor

Throughout the last century, our professors and their students, supported by our excellent staff, developed insulin and the electron microscope, discovered the chemical laser and stem cells, redefined literary criticism, modern media and the digital age, roamed the world to uncover ancient civilizations, invented the glycemic index and pioneered in fields as diverse as organ transplantation and computer graphics. Today, in total research output, the top three universities in the world are Harvard, Tokyo and Toronto.

David Naylor in President's Message, UofT Magazine Winter 2012, p. 5

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## SUPPORTING EXCELLENCE IN MEDICINE AT U OF T



President David Naylor (left), Chancellor David Peterson (centre) and Vice-President (Advancement) David Palmer are surrounded by students as they launch the University of Toronto's new fundraising campaign. (Photo by Caz Zvatkauskas)

Medicine and the health sciences are at a pivotal moment.

Never in history have we witnessed such an explosion of knowledge in the biomedical sciences, nor have we had such powerful tools at our disposal to understand the underlying mechanisms of health and disease. With this profound shift in knowledge, we have unprecedented opportunities to pre-empt, modulate, and even eradicate some of the world's most common illnesses.

The University of Toronto is one of the few places in the world with the comprehensive multidisciplinary strength needed to address the most important challenges in human health today.

The Department of Surgery at the University of Toronto encompasses the education of medical leaders as well as world-class biomedical research and discovery. This talented network includes more than 340 faculty members and over 375 learners at all levels, located both on campus and at our six fully affiliated and two partially affiliated teaching hospitals. Very few universities – or cities, for that matter – possess such a critical mass of expertise.

This past fall saw the public launch of the University's new \$2 billion capital campaign. Entitled BOUNDLESS, the campaign is about exploring boundless possibilities for global leadership and societal impact.

The campaign has targeted substantial funding towards faculty recruitment and retention, student programming and financial aid, research and programs,

and infrastructure. By theme, funds from the campaign will prepare UoT faculty, students and staff to be global citizens as we build global fluency, shape student life and learning, and ensure access and opportunity.

To meet the global challenges facing the University, the campaign will support new knowledge and pioneering research, foster prosperity through invention and innovation, drive breakthroughs in human development and health, address energy, sustainability, and the environment, to help us build successful societies.

Over the coming year, the Faculty of Medicine will incorporate this theme into major public activities and we look forward to officially launch the BOUNDLESS MEDICINE campaign, at which time we will announce our goal as well as our key public platforms.

For more information about the BOUNDLESS campaign please visit [www.boundless.utoronto.ca](http://www.boundless.utoronto.ca).

*Darina Landa  
Senior Development Officer,  
University of Toronto, Faculty of Medicine*

## BOOK REVIEW

### *The Grandest Challenge: Taking Life-Saving Science from Lab to Village* by Abdallah Daar & Peter Singer

With the world's population now approaching 8 billion, approximately 90% live in the poor periphery

with half the life expectancy of the 10% who are privileged to live in the centre of the developed world. Abdallah Daar and Peter Singer are bringing to the peripheral countries the scientific power needed to heal themselves through translation of scientific knowledge.

Abdallah attended medical school in Kampala, Uganda



Abdallah Daar



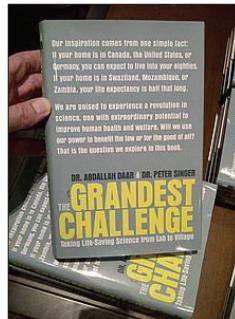
Peter Singer

until the notorious dictator Idi Amin ordered all Asians out of the country. Abdallah completed his degree at the University of London and subsequently studied surgery and internal medicine at Oxford, completing a PhD in Immunology. As a young surgeon, he performed a double kidney transplant from a tiny 34 week gestational age stillborn donor. This is still a world record and the recipient is alive nearly two decades later.

"The **10/90** gap refers to the statistical finding of the Global Forum for Health Research that only 10% of worldwide expenditure on health research and development is devoted to the problems that primarily affect the poorest 90% of the world's population." ([http://en.wikipedia.org/wiki/10/90\\_gap](http://en.wikipedia.org/wiki/10/90_gap)). Reciprocally, 90% of research funding is devoted to problems of the most fortunate 10%. The efforts described in this book are shifting the proportion toward 16/84.

The death of his sister from inadequately treated malaria drove home to Abdallah the lived experience of the 10/90 gap. She was one of the million who die each year from malaria. In 1998, he left his position as Chief of Surgery in Oman for the new field of Global Public Health and Ethics. Though the genome revolution was on, the periphery was left out. "But the discovery of quinine and the malaria patients were all in Africa".

He met Peter Singer while on sabbatical at the University of Toronto Joint Centre for Bioethics. Peter had come to realize the injustice of the 10/90 gap as his meteoric career in bioethics was unfolding. He served as founding director of the Joint Center for Bioethics, where international students from Africa, India, Pakistan and South America came to study under an NIH – Fogarty Foundation grant aimed at promoting justice in international research ethics. Peter was trained in internal medicine at the University of Toronto and in public health and research methods at Yale. He studied ethics at the University of Chicago. He developed the unique model of the Joint Center for Bioethics



The Grandest Challenge:  
Taking Life Saving Science  
from Lab to Village

with its network of ten university hospitals. This allowed him to introduce bioethics from inside the medical system. At a bioethics meeting in Cape Town, he visited a clinic in an African slum and saw first hand the intensity of the 10/90 problem. "The clinic was a small room with peeling paint and nothing in it."

When Abdallah joined Peter at the Joint Centre they launched a campaign to bring the innovations of the genomics revolution to the developing world. Despite initial rejection of their idealistic quest by the scientific community, they published a study in Nature Genetics, ranking the top 10 priorities to improve the health of the developing world. Attracted to the grand challenges proposed by Abdallah and Peter, The Gates Foundation asked their advice on how best to address these problems. This excellent book documents their remarkable experience.

"There can be no peace, no security, nothing but ultimate disaster, when a few rich countries with a small minority of the world's people alone have access to the brave, and frightening, new world of technology, science and high material living standard, while the large majority live in deprivation and want, cut off from opportunities of full economic development; but with the expectations and aspirations aroused far beyond the hope of realizing them."

– *Nobel prize winner and Canadian Prime Minister Lester Pearson*

They had used the Delphi method - "a structured way of building consensus among a group of experts that avoids the interpersonal dynamics of meeting." In Davos, Switzerland, Harold Varmas, former director of the U.S. National Institutes of Health and former director of the Memorial Sloan -Kettering Cancer Centre, came up with the idea of *overcoming critical barriers* as a model for the grand challenges project. This new, unfamiliar and brilliantly simple way to think about a scientific project extended the range of the diseases that could be affected by eliminating a bottle

neck. For example, by eliminating the need for refrigeration, needles, syringes, and repeated doses, the barriers to immunization against many diseases could be addressed directly. Scientists from the developing and developed world collaborated in defining the challenges. Abdallah & Peter guided the selection process, and Bill and Melinda Gates provided the inspiration, determination and the initial financial support to move the projects forward.

The compelling narrative style and in-depth accounts of problems and strategic solutions, told from the personal viewpoint of the authors who participated in every step, provide a gripping story that will engage and benefit scientists and lay readers alike. Curiously, the chapters are entitled “Chapter 1”, “Chapter 2” etc, leaving the reader uncertain about what will happen next as the story unfolds. A fitting climax develops when the Canadian Grand Challenges Program is launched with funding from the Canadian Government as part of its foreign aid budget. The program is serving as an operating system to deploy coalitions of international public, private and not for profit organizations like the Gates Foundation, US NIH, the Wellcome Trust, the World Health Organization and other sponsors. Peter serves as CEO, and Abdallah as Chief Science and Ethics officer of the Canadian Grand Challenges Program.

Current Project of Grand Challenges Canada include identification and funding of rising stars in Global Health, point of care diagnostics, global mental health and creating and strengthening health enterprises.

M.M.

## RESIDENTS' CORNER

**Katie Armstrong** grew up in Toronto, then lived in Chicago and Cleveland, returning to Mississauga when she was 13 years old, where she was an honor student and volunteer. She is very enthusiastic about the Mississauga medical school campus and its beautiful new building. “It looks like it was made by Apple [a reference to the brilliant talents of Apple’s Chief of Industrial Design Jonathan Ive]. The students love it. Instead of raising their hands, they use an audience response system, so all are given a chance to participate.” She was one of the first six students from the Toronto campus to attend our new medical school in Mississauga. She gave a talk to the entering class there on



Mississauga Academy of Medicine

the theme “The City of Mississauga already embraces you, and I hope you will come to consider it *your city*”.

Katie has participated as a facilitator in Pier Bryden’s popular ethics seminars for undergraduate medical students - supported in this activity by her program director in Plastic Surgery, Mitch Brown. She wants to be an academic surgeon with a focus on telemedicine, teaching, and healthcare management. She has done research in telemedicine at the University of Pennsylvania, where she worked on



Katie speaking at a MedInfo conference in Cape Town about her telemedicine experience

the identification of dermatologic diseases using cell phone images sent in to a central diagnostic unit from various free clinics across Philadelphia. The Philadelphia patients were referred to the Wal-Mart \$4 formulary for their medications. As a senior medical student, she continued this work in Botswana, where the University of Pennsylvania maintains a program of continuous telemedicine coverage.

Katie became fascinated with surgery during a rotation as a third year student on general surgery where she “learned that I could actually do things to help people. This was followed by an amazing experience in Plastic Surgery with Stefan Hofer”. She enjoys the reconstruc-

tive nature of Plastic Surgery, especially free flaps and other complex interventions.

In her spare time, she snowboards, runs, and attends a fitness bootcamp in Mississauga with her mother and two sisters. She has read all of Atul Gawande's books, Collins' "Good to Great" and is currently reading "MBA in a Book". She likes the efficiency introduced by telemedicine and is interested in time management in the OR. She hopes to do an MBA or MSc in Health Technology during her Surgeon Scientist period.



Dylan Pannell

lollow soldiers is the dominant value of the vocation".

"The Afghanistan campaign has defined a generation of young Canadians who are now war veterans; all are proud to have served. Canadian warriors are now serving in a mentoring role, having completed their military mission in Afghanistan. Because the country is tribal, no one will be able to force a solution on the Afghan people. It's their country. We did the military component and now it is a diplomatic mission."

Dylan's initial experience with surgery and the surgery of trauma began when he was a medical student and later a family practice resident at St. Michael's Hospital. His role model and mentor is Homer Tien ([http://www.surgicalspotlight.ca/Article.aspx?ver=Spring\\_2009&f=Main](http://www.surgicalspotlight.ca/Article.aspx?ver=Spring_2009&f=Main)). He met Homer in 2004 when he was a medical student at Sunnybrook. They have published 8 papers together on trauma. As a military surgeon, Dylan will be embedded in a civilian hospital, as Homer is embedded at Sunnybrook. There are military surgeons in similar positions in Alberta, British Columbia, and Quebec. Dylan will continue to do research on brain injury, building on his PhD background in molecular genetics, secured at the Hospital for Sick Children. He meets regularly with researchers in the US, focusing on brain injury and combat trauma.

**Dylan Pannell** is a first year general surgery resident and a third generation military man, whose great grandfather and grandfather served in the Boer War and the 1<sup>st</sup> and 2<sup>nd</sup> World Wars. "The profession of arms is a true vocation. It carries danger and allows service to country, while working with great people. Trust in your fel-

Another important mentor was Colonel Howard Coombs, "a PhD war historian and a great officer and thinker in the airborne regiment." Coombs is a professor of strategy at the Royal Military College in Kingston. Following undergraduate training at the University of Toronto, Dylan completed a PhD at the Hospital for Sick Children, working with James Ellis and Howard D. Lipschitz. Dylan describes his experience at the Hospital for Sick Children as "a phenomenal opportunity to be on the cutting edge of the world in research, surrounded by amazing staff. World experts were just down the hall." He started as a summer student and then entered the graduate program and completed a PhD. He was writing his PhD thesis on September 11<sup>th</sup> 2001. He entered the military, completed basic training and went to Afghanistan.

The military offered him an opportunity to complete medical school and his enlisted colleagues pushed him to do so. "Sir, we need doctors. Go to medical school." I was an ivory tower dweller in the scientific world, when the world changed and I became a soldier, then a doctor and then a surgeon. My two vocations are as a soldier - to serve my country, and as a doctor to serve my patients. A basic lesson I have learned is that life can change in unexpected ways. I plan to use research to help soldiers, emphasizing tactical combat trauma care, something you can write about only if you've been there. Military surgical care is now well developed. The survival rate is 98% if a soldier gets to the Kandahar hospital, but there is a new population of injured soldiers. We are teaching them through the "Soldier On" program (see also <http://www.cfpsa.com/en/psp/soldieron/index.asp>). We teach them to use their prostheses and to regain a normal life. They are 100% motivated."

Dylan developed a sense of the broad scope of medicine in his family practice training and on military assignment in the Arctic at 83 degrees north, where he handled every aspect of care of his troops even including dental care. He also learned to operate on dog soldiers injured in Afghanistan. He is an enthusiastic supporter of the broad training that he received in family practice. Griff Pearson and Bob Bell had similar background experience as family practitioners and emergency room doctors before entering their surgical training.

Dylan's hobbies are hunting, fishing, canoeing and running. He is married to Kellie, an emergency room doctor in Georgetown; they have a two year old daughter Sophie.



## Surgical Education Should Begin Early

Martin McKneally

Our undergraduate surgery program is spotlighted in this issue of the newsletter. The expansion of the exposure of our surgical faculty to the preclerkship level is a welcome development, based on the accounts from our undergraduate students Nada Gawad and Michael Bond. When students are exposed to surgical tasks like suturing and coached by surgical role models, the drapes that separated them from the arcane and mysterious world of surgery are lowered.

Our students are deciding early about their future careers and they need early active learning in surgery to try on the technology, culture and values of the surgical profession. "I could imagine myself doing that, especially with some experience" requires seeing, experiencing and doing some of the fascinating work of surgery with the right role models and mentors. George Christakis and Shibu Thomas are providing just exactly that and doing it well. The suturing sessions with preclerkship students in the first and second years have exposed undergraduates to John Wedge, Jim Rutka and a superb cast of faculty surgeons who are accessible and interested in helping them develop their understanding and test their aptitude for surgery.

Delaying surgery until clerkship misses the opportunity to inspire, converse and present role models sufficiently early in medical school. I was inspired by the diagnostic skills of thoracic surgeons William Barnes and Eugene Cliffton at New York Hospital and Memorial Sloan Kettering when I was an undergraduate. My mentor Hollan Farr showed me surgical humanity and patience, when I called him unnecessarily at midnight. I was worried about crepitus in the laparotomy wound of the dog my classmates and I had operated upon with him in the laboratory that afternoon. "It's just air trapped in the tissue planes. It's too early for gas gangrene, but I'm glad you called to check it out."

Surgical Skills and knowing surgeons enable future family doctors to provide basic surgical care in the emergency room and assist at operations in their later practice. Surgeons of the future who are drawn to train for the specialty now will need more facilities to enable importing patients who are attracted, and able to pay to support and expand Canada's excellent public system. They will likely disperse after their formal training to distant parts of Canada and the rest of the world as part of their career development, adding richly to their experience. They will help the specialty evolve, as the recent exciting work with organ repair for transplantation, the development of bariatric surgery, and multi-modal stenting for vascular and cardiac disease will change surgery as we currently know it. They will also develop economical solutions to bend the cost curve down to more realistic levels. (see also: [http://www.surgicalspotlight.ca/Article.asp?x?ver=Fall\\_2011&f=BusinessNeurosurgery](http://www.surgicalspotlight.ca/Article.asp?x?ver=Fall_2011&f=BusinessNeurosurgery)). Our training programs will be refined to a needs based economic model as disruptive innovations displace or modify the more elaborate, traditional technology of many contemporary operations, the way stenting, minimal access techniques, and off pump variants have modified vascular and cardiac surgery.

Bravo to George Christakis, Shibu Thomas, our students and our surgical educators for the excellent initiatives in undergraduate education described in this issue.

### Correction:

The Editor's Column in the Fall issue contained a misprint. The correct statement should read: This innovative direct entry program in Cardiac Surgery was established in Canada in 1994.



"Wowie-zowie, bub, guys?"

© Jack Ziegler / www.cartoonbank.com

# NEW STAFF

**Martin A. Koyle** recently joined The Hospital for Sick Children as Professor and Program Head for the Division of Urology. He was previously Division Chief at Seattle Children's Hospital and held the Michael Mitchell Chair in Pediatric Urology at the University of Washington.

After completing medical school at the University of Manitoba, Martin undertook residency and fellowship training at USC Los Angeles Medical Center, Harvard University and in San Francisco. During his more than a quarter century in academic urology, Martin Koyle has been known for his innovations and contributions to the fields of pediatric urology and transplantation. He was the first to publish on laparoscopic nephrectomy in infants, introduced the MACE (Malone Antegrade Continence Enema), the Bianchi technique (single incision orchidopexy) and the Bracka hypospadias repair to North America, and also exported the tubularized incised urethral plate hypospadias repair (Snodgrass technique) beyond North America to Europe and Asia. He has contributed over 200 publications and chapters to the literature.

*Joao Luiz Pippi Salle,  
Division Head, Urology  
The Hospital for Sick Children*

The Division of Orthopaedic Surgery at Mount Sinai Hospital is happy to welcome **Paul Kuzyk** to the team. Paul has completed an undergraduate degree in Engineering Chemistry at Queen's University. He attended medical school and completed residency in Orthopaedic Surgery at the University of Toronto. In the surgeon-scientist program, Paul earned a



Martin A. Koyle

Masters of Applied Science through the Institute of Biomaterials and Biomedical Engineering (IBBME).

After residency, Paul completed a year of clinical fellowship at St. Michael's Hospital in hip and knee reconstruction and orthopaedic trauma. He was awarded The Hip Society European Fellowship in Hip Reconstruction by the Maurice E. Müller Foundation of North America. He spent half a year at the Inselspital in Bern, Switzerland gaining experience in hip surgery. This was followed by half a year as a clinical fellow in the Adolescent and Young Adult Hip Program at Harvard University.

Paul's clinical practice will involve hip and knee arthroplasty as well as surgical treatment of young adult hip pathologies, such as dysplasia and femoroacetabular impingement. His primary research focus is orthopaedic biomechanics and biomaterials.

## *David Backstein*

*Head, Division of Orthopaedic Surgery,  
Mount Sinai Hospital Medical Lead & Chair,  
Mount Sinai Centre for MSK Disease*

The Department of Surgical Oncology, Division of Urology is pleased to announce the recruitment of **Girish Kullkarni** to the University Health Network, Princess Margaret Hospital. Girish's main clinical interests lie in the realms of bladder and prostate cancer and his appointment in the role of Surgeon Scientist is a first for the Division of Urology at the University of Toronto.



Girish Kullkarni



Paul Kuzyk with his wife Jen  
in Zermatt, Switzerland

He graduated from medical school and urology residency from the University of Toronto. During his residency, he completed a PhD in Clinical Epidemiology while enrolled in the Surgeon Scientist Program. He has published many high impact publications in prostate and bladder cancer and is a past recipient of the prestigious Ambrose Reed Socioeconomic Prize, awarded by the American Urological Association for his work in decision modeling and cost-effectiveness research in bladder cancer. Following residency in 2010, he successfully completed a fellowship in urologic oncology at Memorial

Sloan-Kettering Cancer Center in New York City.

Girish's main research interests are in health services and outcomes research. He has recently been appointed as an Adjunct Scientist at the Institute for Clinical Evaluative Sciences. He also has an interest in comparative effectiveness research and decision modeling.

**Neil Fleshner,**  
*Head of the Division of Urology, UHN*

**Tony Moloney** has joined the Division of Vascular Surgery at St. Michael's Hospital after completing a 2-year Fellowship at St. Michael's Hospital and the Toronto General Hospital. His clinical interests include open vascular and endovascular surgery and interventional radiology. Special interests are complex aortic pathology, type B aortic dissections and vascular trauma.



Tony Moloney

**Tom Lindsay,**  
*Director, Toronto General Hospital Vascular Centre*

## ANNOUNCEMENTS

### CALVIN LAW APPOINTED HEAD OF SURGICAL ONCOLOGY, SUNNYBROOK



Calvin Law

I am delighted to announce that Calvin Law has been appointed as the new Head, Surgical Oncology, Odette Cancer Program, Sunnybrook Health Sciences Centre.

A Search Committee that included leaders from Cancer Care Ontario, Sunnybrook Health Sciences Centre, Toronto East General Hospital, North York General Hospital, and the Odette Cancer Program unanimously recommended the appointment of Dr. Law

as the new Head, Surgical Oncology.

Calvin is a hepatobiliary-pancreatic and gastrointestinal Surgical Oncologist at the Odette Cancer Centre. He is an Associate Professor of Surgery at the University of Toronto, with a cross-appointment to the Department of Health Policy, Management and Evaluation. He is also the Site Lead for gastrointestinal oncology at the Odette Cancer Centre.

Academically, Calvin currently holds the Hanna Family Research Chair in Surgical Oncology at the University of Toronto and serves as an Adjunct Scientist for the Institute of Clinical Evaluative Sciences. His broader academic work includes serving as a graduate student supervisor for the Surgeon Scientist Program at the University of Toronto, a member of the Gastrointestinal Oncology Group at the Program in Evidenced Based Care for Cancer Care Ontario and an Examiner for the Royal College of Physicians and Surgeons of Canada. He also serves as the national chair for the Canadian NET Alliance and national co-chair for the Canadian HiPEC Collaborative Group.

Calvin completed medical school training at the University of Toronto and general surgery training at McMaster University. He completed surgical oncology training at the University of Toronto and earned a Masters degree in Public Health at Harvard University.

Please join me in congratulating Calvin as he assumes this important leadership role.

**Andy Smith**  
*Chief, Odette Cancer Program, Sunnybrook & Regional Vice President, Cancer Care Ontario*

## IN MEMORIAM

### ARA KERESTECI

Ara Gabriel Keresteci passed away peacefully on November 14, 2011 at the age of 82. Ara was born in Istanbul, Turkey and graduated from Istanbul University Medical School in 1954. He did post-graduate training at the St John's Episcopal Hospital in



Ara Keresteci

Brooklyn, NY, before coming to Canada. Following further surgical training at the University of Toronto, he joined the Department of Surgery in the Division of Urology at the Wellesley Hospital where he worked for over 30 years caring for thousands of patients. Following the closure of the Wellesley Hospital in 2002, he worked at St Michael's Hospital until his retirement in 2004. Dr Keresteci was a beloved clinical teacher who helped train a generation of urologists at the University of Toronto.

*James Rutka*

## Oleg Safir Appointed as Director of the Surgical Skills Centre at Mt Sinai Hospital



Oleg Safir

I am pleased to inform you that after a comprehensive search, Oleg Safir, Division of Orthopedics, Mt Sinai Hospital, has been appointed as the new Director of the Surgical Skills Centre at Mt Sinai Hospital to replace Helen MacRae who will be stepping down from this position after having served successfully for a 10 year term. Oleg received his FRCSC in Orthopedic Surgery in 2006. He was appointed as an Assistant Professor in the Department of Surgery in 2007. He then completed a Masters in Education from the Ontario Institute for Studies in Education in 2009. He has been actively involved in the competency based curriculum (CBC), and helped design the Boot Camp in Orthopedics this past year. He has over 45 publications since 2007, and holds grants on the performance of technical surgical skills from several granting agencies. Oleg began his new position effective December 1st, 2011. Please help me welcome Oleg Safir as the new Director of the Surgical Skills Centre.

*J.R.*

## Helen Macrae Takes Lead as Colorectal Surgery Program Director



Helen MacRae

Helen MacRae has successfully completed a 10 year term as the GH Gales Director of the Surgical Skills Centre (SSC) at Mt Sinai Hospital. While in this position, Helen has brought great acclaim to the SSC not only with her oversight of the expansion of the unit in 2007, but also with her dedication and devotion to creating an academic skills centre with outstanding publications and grants that were highly focused in the field. I would like to take this opportunity to thank Helen sincerely for her extraordinary efforts with the SSC these past 10 years.

Helen Macrae has been appointed as the Colorectal Surgery Program Director, succeeding Marcus Burnstein who has served in this capacity for the last 16 years.

*J.R.*

## General Surgery Receives MIS Fellowship Accreditation

The Division of General Surgery has received full accreditation by the Fellowship Council for their MIS (Minimally Invasive Surgery) fellowship. Congratulations to Allan Okrainec and the faculty, fellows, and residents who took part in the accreditation process.

## Non-clinician Scientist Retreat

A special retreat for Non-clinician Scientists (NCS) was held on November 23rd, at the Chestnut Residence to discuss challenges and opportunities facing scientists within the Department of Surgery. There were over 30 participants.

Presentations were given by several new faculty scientists regarding their research programs. Andras Kapus reviewed the results of a survey that was performed this year, and compared to an identical one performed a few years ago with interesting results and trends. Karen Davis, Mingyao Liu, Geoff Fernie, and Cari Whyne discussed the successes and obstacles for continued collaborations between clinician and non-clinician researchers. The afternoon session included perspectives from leaders in the Research Institutes in the city with Gwen Burrows, Director Strategic Projects at Sick Kids, Michael Julius, Research Director Sunnybrook Health Sciences Centre Research Institute, Jim Woodgett, Research Director Mt Sinai Research Institute, and Mansoor Husain, Research Director Toronto General Research Institute as panelists. Vice Dean of Research in the Faculty of Medicine Alison Buchan also participated, and provided many insightful comments.

The main discussion points from this retreat will be used to inform the ongoing Strategic Planning process in the Department of Surgery to improve the support at multiple levels for scientists within the Department of Surgery. We thank Andres Kapus for organizing the retreat this year.

*J.R.*

## Access to World Science



Doug Kondziolka

A team at the University of Pittsburgh led by U of T alumnus Doug Kondziolka of neurosurgery and Ken Sochats of Information Science have led a four year project to create a fully functional science network. This will enable all involved to learn the elements of writing a scientific paper, while they participate in a multi-author collaborative environment.

World Science is a free, web-based network where authors write collaboratively, and anyone can use, research, read, combine and ask questions of peer-reviewed information. This has first been launched fully (key words and drop down data menus) for the neurosurgery and radiation oncology communities, but articles can currently be written for any discipline. There are opportunities for interested students to participate in development for their own future subspecialty (just contact Doug at [kondziolkads@upmc.edu](mailto:kondziolkads@upmc.edu))

Articles can be written in the network, removed for submission elsewhere, or submitted within World Science for a novel and enhanced peer review process – actually allowing the process of peer-review to be studied for the first time. Articles published in World Science have full interactive functions including the ability to combine and analyze data from multiple articles with one click, and ask questions of articles directly without reading the full report. “Help” is already in 10 languages.

It can be accessed at [www.world-sci.com](http://www.world-sci.com). Upon entering, request a beta invitation. You can then click “edit me” after log-in to create your own password. Once you have the password, you can start to write any kind of article.

*J.R.*

# Natalie Coburn Appointed Head of Division of General Surgery, Sunnybrook

Natalie Coburn has been appointed Head of the Division of General Surgery in the Department of Surgery at Sunnybrook Health Sciences Centre. Natalie has also taken on the role of Clinical Leader for Quality and Patient Safety in the Division of General Surgery.



Natalie Coburn

*James Rutka*

## IN THE MEDIA

### SPEEDY SURGERY LESSENS CHANCE OF PARALYSIS IN CERVICAL SPINAL CORD INJURIES

Michael Fehlings' work on the return of function after early surgery for spinal injured patients was featured by the Toronto Star in a piece entitled "Speedy surgery lessens chance of paralysis in cervical spinal cord injuries" (<http://www.thestar.com/news/article/1135917--speedy-surgery-lessens-chance-of-paralysis-in-spinal-cord-injuries>). This work on early surgery in spinal injuries was published in PLoS ONE and represents an important milestone in this field.

*Andres Lozano*

### DAY SURGERY FOR CEREBRAL ANEURYSMS

Michael Tymianski, Division of Neurosurgery, Toronto Western Hospital received attention from the *Globe and Mail* for his success in performing outpatient craniotomy for cerebral aneurysms through a minimally invasive approach. The full story is found online at the *Globe and Mail*, February 22, 2012. (<http://www.theglobeandmail.com/life/health/new-health/conditions/brain-health/a-world-first---day-surgery-for-cerebral-aneurysms/article2346364/>).

This work is a world-first for aneurysm surgery and represents a paradigm shift in the way that the procedure is regarded and conducted.

### REDEFINING COMPLEX AND 'HOPELESS' CANCER SURGERY

Ian McGilvray, Division of General Surgery, member of the multi-organ transplant program at the Toronto General Hospital, was featured in the *Toronto Star* February 24, 2012 (<http://www.thestar.com/news/article/1136621-toronto-surgeon-redefines-hopeless-cancer-cases>), for his groundbreaking work operating on patients with advanced liver cancer. With his technique, the cancer is removed using a modified "ex vivo" approach.

*James Rutka*

## Shafie S. Fazel Outstanding Resident Surgeon and Investigator Award

The Shafie S. Fazel Outstanding Resident Surgeon and Investigator Award has been set in memory of Dr. Shafie S. Fazel, an outstanding resident within the Division of Cardiac Surgery, University of Toronto. The award will be presented annually to a senior resident in his or her last year of training within the Department of Surgery, University of Toronto, who has demonstrated outstanding accomplishments during their residency both as a surgeon and as an investigator.

Each division within the Department of Surgery will be asked to submit the name of one potential candidate. Nominations must be accompanied by a letter of support from the division's Program Director, outlining how the nominee meets the criteria. The award will consist of a monetary prize in the amount of \$1000.00, along with a plaque bearing the name of Shafie S. Fazel.

## On the *Nature* of Great Science Performed by Surgeons

Two surgeons in our Department published papers in the premiere scientific journal, *Nature*, within a month of each other. These incredible studies have shed light on the important disease processes of cancer and stroke, and have brought great credit to our Department.

In February, Michael Taylor, Division of Neurosurgery, the Hospital for Sick Children, and colleagues published their studies on the genetic origins of metastases in pediatric medulloblastoma, the most common malignant pediatric brain tumour (1). Interestingly, Michael used the powerful *Sleeping Beauty* transposon system as a tool to develop cerebellar tumours in mice, and to identify genes that lead to formation of metastases. Using high throughput and ultra-high resolution genetic mapping and DNA sequencing techniques on numerous primary pediatric medulloblastoma specimens, Michael showed that the metastatic tumours had new mutations which were not part of the original or primary tumours. His study suggests that neurosurgeons may wish to consider biopsying the metastases of medulloblastoma now given the fact that they harbor different genetic lesions, and are likely best treated with different strategies than the primary tumour. The first author of the Taylor Lab publication is Xiaochong Wu, a postdoctoral fellow in the Arthur and Sonia Labatt Brain Tumour Research Centre.

In March, a research study from Michael Tymianski's laboratory was also published in *Nature*. Michael is Professor of Neurosurgery at the University of Toronto, and Senior Scientist in the Toronto Western Hospital Research Institute. Stroke is a leading cause of death and disability. To identify a strategy for improving stroke therapy, where previously so many trials and agents have failed, Michael and his co-authors used an inhibitor postsynaptic density protein (PSD)-95, an inhibitor that Michael had previously demonstrated to be effective in the prevention and minimalization of brain injury after stroke, to show that this inhibitor could be effective in the brains of non-human primates (2). Cerebral infarct volumes were reduced after inhibitor therapy as measured by magnetic resonance imaging (MRI), histology, and behavioural and neurological examinations. Their research findings are exciting and timely, as they suggest that neuroprotection using PSD-95 inhibitors in humans should also be possible to improve stroke outcome in patients. The first author on Michael's publication is DJ Cook, a neurosurgery resident enrolled in the Surgeon Scientist Program (SSP) in the Department of Surgery at the University of Toronto.

While I have not performed an exhaustive literature search on high impact publications by our faculty, the publication of these two *Nature* papers occurring in sequential months in 2012, is likely a first in the Department of Surgery. For those interested, the Impact Factor of *Nature* is 36. On behalf of the Department of Surgery, I should like to congratulate the two Michaels and their research teams for their incredible research achievements, and for bringing great credit to the University of Toronto.

*James T Rutka*

1. Wu X, Northcott PA, Dubuc A, Taylor MD, Clonal selection drives genetic divergence of metastatic medulloblastoma. *Nature* February 2012
2. Cook DJ, Teves L, Tymianski M, Treatment of stroke with a PSD-95 inhibitor in the gyrencephalic primate brain. *Nature* March 2012

# The 29th Annual E. Harry Botterell Visiting Lectureship in Neurosurgery

On November 10th 2011, the Toronto Western Hospital was host to the 29th Annual E. Harry Botterell Visiting Lectureship in Neurosurgery. We welcomed Professor of Clinical Neurosurgery at the University of Miami Jacques Morcos, who delivered three excellent talks entitled "The temporal bone in skull base tumor surgery: The conquest of the rock", "Cerebrovascular surgery: The future is not what it used to be ... and other random thoughts!" and "Endoscopic endonasal surgery: One man's limits, another man's playground". Professor Morcos also served on the judging panel for this year's William J. Horsey Prize, which recognizes the best clinical research presentations by University of Toronto neurosurgery residents. Congratulations to PGY3 resident Safraz Mohammed, who took first prize for his talk entitled "Idiopathic normal pressure hydrocephalus: A study of outcome measures, utility and health status" and to PGY4 resident David Cadotte who won second prize for his work entitled "Keeping up with the times: A citation based curriculum".

This year's Botterell program was modified to include a special tribute on November 11 to **Dr. Ab Guha**, our distinguished 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 Auditorium 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.

Mark Bernstein, the Greg Wilkins-Berrick Chair in International Surgery at Toronto Western Hospital, has been instrumental in the establishment of a special named lecture dedicated in honor of Dr. Guha and his

surgical philanthropic work. The first annual Ab Guha Lecture will be presented in May 2012 at the Bethune Round Table, a three-day meeting co-organized each year by Dr. Bernstein for approximately 50 surgeons from resource-poor countries to come to Canada to present their work and advance their surgical knowledge.

*Andres Lozano*

We are pleased to announce that **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 Charles's tremendous accomplishments and contributions in the field.

PGY4 resident Jeff Wilson has been 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*". This award is given for the best resident spine abstract to be presented at the 80th AANS Annual Scientific Meeting in Miami on Apr. 14-18, 2012 and we congratulate Jeff on this accomplishment.

*Andres Lozano*

## Hockey Tournament

The Department of Surgery is organizing a **hockey tournament March 31, 2012**. If you are interested in participating, please let Stephanie know at [s.neilson@utoronto.ca](mailto:s.neilson@utoronto.ca) or 416-946-4003. Teams will be formed on a Divisional basis.

## Slo-pitch Tournament

The Department of Surgery will be hosting a slo-pitch tournament in the spring of 2012. If you would be interested in signing up for this event, please let Stephanie know at s.neilson@utoronto.ca or 416-946-4003.

## AWARDS/ ACHIEVEMENTS/ HONOURS

**Subodh Verma** (CardSurg), in a collaboration between St. Michael's Hospital and King Saud University received a joint U.S. patent entitled: "Method for Preventing and Treating Cardiovascular Diseases with BRCA1".

**Lee Errett** (CardioSurg) was named the Honorary Chair, Shandong University Cardiac Research Centre, Jinan, Shandong Province CHINA for assisting in the development and creation of its cardiac surgery program.

Lee was also named the Honorary Chair, Second Military University of Shanghai, Shanghai, CHINA

**Mingyao Liu** (ThorSurg) was awarded a 5-year Canadian Institutes of Health Research (CIHR) Grant for the project entitled "Acute lung injury: from cellular mechanisms to molecular therapies" (2011 – 2016).

**Kazuhiko Yasufuku** received a 5 year Canadian Institutes of Health Research (CIHR) Grant for his study "Porphysome nanoparticle-enabled minimally invasive transbronchial photothermal ablation of lung cancer" (2011 – 2016) Co-PI (PI – Gang Zheng)

**Thomas Waddell** (ThorSurg) was awarded a 5 year Canadian Institutes of Health Research (CIHR) grant for his study "Development of personalized immunotherapy to treat lung cancer using gamma-delta-T cells" (2011- 2016) Co-PI (PI – Li Zhang).

**Daniel Abramowitz and Matt Strickland (GenSurg)** of the team "Wiggle Wiggle" were the 2012 Winners of the Laparoscopic Skills Challenge, a yearly event that has been running at the University of Toronto Surgical Skills Centre at Mount Sinai Hospital since 2001.

**Patrick Gullane** (H&NSurg) was awarded an honorary fellowship by the Royal College of Surgeons in Ireland, the highest honour bestowed by the college. Honorary fellowship is awarded in recognition of an individual's outstanding contributions to medicine, surgery and humanity. The award was presented at the college's annual Charter Day meeting at which Prof. Gullane delivered the 87th Abraham Colles keynote lecture, "*Innovation and Creativity in Head & Neck Surgery: A Journey of a Lifetime.*"

**Fred Gentili** (NeurSurg) was presented with of the College of Physicians and Surgeons of Ontario Council Award, given in recognition of outstanding Ontario physicians who have demonstrated excellence and come closest to meeting society's vision of an "ideal physician".

**Charles Tator** (NeurSurg) received the College of Physicians and Surgeons of Ontario Council Award for 2012 in recognition of his achievements in neurosurgery research, education, teaching and advocacy.

**Charles Tator** and **Michael Fehlings** (NeurSurg) 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.

**Michael Fehlings** (NeuroSurg) has become the President of the Cervical Spine Research Society (CSRS) for 2011-2012.

**Michael** was also the lead author on a paper entitled "*Is Surgery for Cervical Spondylotic Myelopathy Costeffective? Results of a Prospective Study with Health Utilities Assessments*", which was ranked as one the top 10 clinical papers in musculoskeletal research in 2011 by *Orthopedics This Week*.

Michael 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).

**Gregory Hawryluk** (NeurSurg), PGY5, successfully defended his PhD thesis entitled, “Defining the Mechanisms by which Transplanted Neural Precursor Cells Mediate Functional Recovery Following Spinal Cord Injury” under the supervision of Michael Fehlings.

**Eric Massicotte and Michael Fehlings** (NeurSurg) were co-authors on a paper entitled “*Predictors of Outcomes in Surgical Treatment for Cervical Spondylotic Myelopathy: the AOSpine North America Multicenter Prospective Study*”, which won a Value Abstract Award at the North American Spine Society 2011 Annual Meeting.

**Andres Lozano** (NeurSurg) was awarded a three-year 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*”.

**Gelareh Zadeh** (NeurSurg) was awarded a one-year BRAINchild grant entitled “*Examining adverse radiation effects in developing brain*.”

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

Gelareh was awarded a 5-year 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 also received a 5-year Operating Grant as Co-PI from the Canadian Institutes of Health Research (CIHR) for the project entitled “Targeting Thrombospondin-1 in medulloblastoma.”

Gelareh (Co-PI) and colleagues are recipients of an Allied Health Research Award for the project entitled “Neuropsychological outcomes after anterior skull base surgery - a comparison study of a balanced cohort operated with an endonasal or transcranial approach.”

**Loch Macdonald** (NeurSurg) was awarded the Canadian Institutes of Health Research (CIHR) Planning Grants—International Research Collaborations for the project entitled “Subarachnoid Hemorrhage International Trialists (SAHIT) Repository.”

**Adrienne Weeks** (NeuroSurg), PGY5, received the 2011 A.W. Harrison Resident Teaching Award, 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** (NeuroSurg), PGY4, has been 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 will present his work, judged to be the best resident spine abstract, at the 80th AANS Annual Scientific Meeting in Miami in April 2012.

**Allan Martin and Alireza-Seyed Mansouri** (NeurSurg) of the team “Minute Men” won the 2<sup>nd</sup> place at the 2012 Winners of the Laparoscopic Skills Challenge, a yearly event that has been running at the University of Toronto Surgical Skills Centre at Mount Sinai Hospital since 2001.

**Safraz Mohammed** (NeurSurg), PGY3 resident, took first prize for his talk entitled “*Idiopathic normal pressure hydrocephalus: A study of outcome measures, utility and health status*” at the William J. Horsey Prize competition, which recognizes the best clinical research presentations by University of Toronto neurosurgery residents.

**David Cadotte** (NeurSurg), PGY4 resident, won the William J. Horsey Prize second place for his work entitled “*Keeping up with the times: A citation based curriculum*”.

PGY5 resident **Scellig Stone** (NeurSurg) has successfully defended his PhD thesis on adult hippocampal neurogenesis and memory enhancement, completed under the supervision of Division Chair Andres Lozano.

**Unni G. Narayanan** (OrthoSurg) received a distinguished John Whittaker Memorial Cerebral Palsy Award, 2011 presented by the Ontario Association of Children’s Rehabilitation Services for outstanding achievement in rehabilitation research and development

**Niloofar Dehghan** (PGY4), **Michael McKee & Emil Schemitsch** (OrthoSurg) were awarded an AO Foundation Startup grant for their study *Operative vs. Non-operative Treatment of Acute Unstable Chest Wall Injuries - A Multi Centered Randomized Controlled Trial* (\$130,000 CAD). They have started enrollment for the project at St. Michael's Hospital, and hope to start at other sites across Canada and US in the upcoming months.

**Diane Nam** (OrthoSurg) was one of ten to receive a New Investigator Recognition Award at the recent meeting of the Orthopaedic Research Society.

**Robert Bell** (OrthoSurg), CEO of the University Health Network was the recipient of the 2011-2012 Award of Excellence in Public Relations presented by The Canadian Public Relations Society.

**Toni Zhong** and **Stefan Hofer** (PlasSurg) received CIHR Knowledge Translation Research Grant entitled "*Development of a Decision Support Tool in Post-Mastectomy Breast Reconstruction Surgery*" with co-investigators **Kelly Metcalfe** and **David McCready**.

In addition, **Toni Zhong** was successful with a CIHR Planning Grant entitled "*Patient-Reported Outcomes in International Surgical Reconstruction Missions*".

**Kristen Davidge** (PlasSurg) was awarded the Mentor Canada, Johnson and Johnson Medical Companies Prize for Best Clinical Paper, at the Annual Resident Research Day, Division of Plastic and Reconstructive Surgery, University of Toronto 2012 for her paper "*Processes of Care in Autogenous Breast Reconstruction with Pedicled TRAM Flaps: Expediting Postoperative Discharge in an Ambulatory Setting*", (Supervisors: John Semple and Mitchell Brown)

**Siba Haykal** (PlasSurg) received the Best Basic Science Award at the Annual Resident Research Day, 2012 for "*Determining the In Vitro and In Vivo Immune Response Towards Decellularized Porcine Tracheal Allografts Used in Airway Transplantation*" (Supervisors: Stefan Hofer and Thomas Waddell).

**Ron Somogyi** (PlasSurg) received the Best Clinical Paper Award at the Annual Resident Research Day, Division of Plastic and Reconstructive Surgery, University of Toronto 2012 for "*Complications and Reoperations in Primary Breast Augmentation and Augmentation Mastopexy: A Single Surgeon's Review of 1700 Cases*" (Supervisor: Mitchell Brown)

**Kyle Wanzel** (PlasSurg) received the St. Joseph's Department of Surgery Teacher and Mentor of the Year Award for 2011. This is an award given to the surgeon with the highest TES scores given by residents and medical students that have rotated through the Department.

**Ronald Zuker** (PlasSurg) was the recipient of the Fu Chan Wei Award for Reconstructive Surgery presented at Chang Gung Mayo Clinic Symposium in Microsurgery in Tapei, Taiwan.

## Laparoscopic Skills Challenge



Left to right, Daniel Abramowitz, Lisa Satterthwaite (SSC Manager) and Matt Strickland.

The Laparoscopic Skills Challenge is a yearly event that has been running at the University of Toronto Surgical Skills Centre at Mount Sinai Hospital since 2001. This years competition was held on Tuesday February 21<sup>st</sup> 2012 as part of the weekly core curriculum sessions. The PGY 1 resident's pair up and compete for the fastest total time in 3 laparoscopic tasks; peg transfers, cobra rope and knot tying. The 2 teams with the lowest cumulative times advance to a head-to-head battle to win the Championship Title.

Congratulations to the 2012 Winners of the Laparoscopic Skills Challenge! Daniel Abramowitz and Matt Strickland of the team "Wiggle Wiggle" from the Division of General Surgery.

The Surgical Skills Centre would also like to congratulate the 2<sup>nd</sup> place team; Allan Martin and Alireza-Seyed Mansouri of the team "Minute Men" from the Division of Neurosurgery.

*Lisa Satterthwaite,  
Manager Surgical Skills Centre*

The Division of Plastic & Reconstructive Surgery division was most fortunate in having Professor of Surgery, Pediatrics and Neurosurgery Michael L. Bentz from the University of Wisconsin School of Medicine and Public Health as the Hoyle Campbell 2012 Visiting Professor. Apart from demonstrating his skills on the local go-kart circuit, Mike invested a huge amount of his time and energy during his 3 days visiting Toronto and gave two fantastic lectures on mentorship and staying healthy.

Thank you Mike for imparting your energy and wisdom I would also like to thank all of the Plastic Surgery staff who made the effort to attend the event and sacrifice a day with the family or in the OR. It sends a significant message of solidarity and speaks to the concept of our division as a community. The division would also like to thank James Rutka for his opening comments and presence at the event.

Finally, this wouldn't have come together without the huge effort of Joel Fish who assured that all aspects of the visiting professorship ran smoothly, from making sure the go-karts were properly tuned to having a first-rate venue to highlight the presentations. Thanks also to Greg Borschel and Kathy Pavlovic for all of their efforts behind the scenes.

For photos from this event, please click on following link: [https://picasaweb.google.com/DivisionofPlasticSurgery/DivisionOfPlasticReconstructiveSurgeryResearchDayFebruary102012?authuser=0&authkey=Gv1sRgCMP0lsX786W\\_Vw&feat=directlink#](https://picasaweb.google.com/DivisionofPlasticSurgery/DivisionOfPlasticReconstructiveSurgeryResearchDayFebruary102012?authuser=0&authkey=Gv1sRgCMP0lsX786W_Vw&feat=directlink#)

The Annual Residents Research Day and Tau Omicron Visiting Professorship is the highlight of our academic year. I am immensely proud of the work that we all do and the message of innovation, creativity and dedication that we send to our colleagues. Thanks to everyone!

*Christopher R. Forrest  
Interim Chair, Division of Plastic and  
Reconstructive Surgery  
Chief, Division of Plastic and Reconstructive Surgery  
Medical Director, HSC Centre for Craniofacial  
Care and Research*

## VISITING PROFESSORSHIPS DIVISION OF NEUROSURGERY

**Mark Bernstein** was a Guest Lecturer at the Division of Neurosurgery, University of British Columbia. Vancouver, BC. Nov. 1-2, 2011.

**Michael Cusimano** was an Invited Plenary Speaker at the Canadian Injury Prevention and Safety Promotion Conference. "Shedding Light on Concussions in Hockey". Vancouver, BC. Nov. 16-18, 2011.

**Michael Fehlings** was Invited Speaker at the 26th Annual Meeting, North American Spine Society (NASS). "The efficacy of cell-based therapies for spinal cord injury." Chicago, IL. Nov. 2, 2011.

**Michael Fehlings** was a Guest Speaker at the Annual Conference of the Ontario Association of Children's Rehabilitation Services. "Stem cell therapy in children with cerebral palsy." Toronto, ON. Nov. 7, 2011.

**Michael Fehlings** was Invited Presenter at the Days of Molecular Medicine 2011 Re-engineering Regenerative Medicine Meeting of the American Association for the Advancement of Science. "Repair and regeneration of the injured brain and spinal cord: The future is now." Hong Kong. Nov. 11, 2011.

**Michael Fehlings** was Organizer and Master of Ceremonies at the 10th Annual Charles H. Tator-Barbara Turnbull Lectureship Series in Spinal Cord Injury, Krembil Neuroscience Centre. "Repair and regeneration of the chronically injured cervical cord." Toronto, ON. Nov. 25, 2011.

**Mojgan Hodaie** was Invited Speaker at the Annual Meeting of the Functional Neurosurgery and Radiosurgery Society of Taiwan. Taipei, Taiwan. Oct 21-22, 2011.

**Mojgan Hodaie** was Invited Speaker at the Nanosymposium of the Society for Neuroscience 2011 Annual Meeting and gave two presentations. 1) “Hemispheric asymmetry in white matter connectivity of the temporoparietal junction: A multi-dataset probabilistic tractography study”; 2) “Cortical and subcortical gray matter changes associated with classical trigeminal neuralgia.” Washington, DC. Nov. 12-16, 2011.

Mojgan Hodaie was Guest Speaker at the World Society for Stereotactic and Functional Neurosurgery Interim Meeting and delivered two talks. 1) “Tractography in functional neurosurgery”; 2) “Education and training in Africa – the way forward” Capetown, South Africa. Nov. 20-23, 2011.

**David Houlden** was Visiting Professor at the Department of Anaesthesiology, McMaster University. “Anaesthesia and intraoperative neurophysiological monitoring – working together for better outcomes”. Hamilton, ON. Nov. 2, 2011.

**Andres Lozano** was Invited Speaker at the Medtronic Symposium. “Future developments in Brain Stimulation.” Berlin, Germany. Nov. 11, 2011

**Andres Lozano** was Visiting Professor for the 2011 Aitken Memorial Lecture, University of Western Ontario and gave two talks. 1) “History for Psychiatric Disorders”; 2) “Emerging Applications for DBS Stimulation.” London, ON. Nov. 22-23, 2011.

**James Rutka** was Invited Speaker at the Congress of Neurological Surgeons’ 2011 Annual Meeting. “Current Strategies for Management of Pediatric Brain Tumors.” Washington, DC. Oct. 5, 2011.

**James Rutka** was Guest Lecturer for the Matthew Wood Lectureship at the Semmes-Murphy Clinic. “Neurosurgical management of craniopharyngioma in children: The pendulum keeps swinging.” Memphis, TN. Oct. 28, 2011.

**Charles Tator** was an Invited Speaker at the Concussions in Sports: Effect of Media Violence, Conference at the University of Western Ontario. “When Violence Becomes Entertaining.” London, ON. Oct. 19, 2011.

**Charles Tator** was Keynote Speaker at the 8th Annual Krembil Neuroscience Symposium, University Health Network. “Traumatic Brain Injury.” Toronto, ON. Oct. 27, 2011.

**Charles Tator** was an Honorary Speaker at the Charles H. Tator – Barbara Turnbull Lectureship Series in Spinal Cord Injury. Krembil Neuroscience Program, University of Toronto. “Which stem cell will win the race to repair the spinal cord?” Toronto, ON. Nov. 25, 2011.

**Michael Tymianski** was Invited Speaker at the Charlton/ Dostrovsky Symposium at the University of Toronto. “From molecular therapies to clinical trials: the development of PSD95 inhibitors for stroke.” Toronto, ON. Nov. 18, 2011.

Michael Tymianski was the Symposium Chair for the Cerebrovascular Section of the 29th Annual E. Harry Botterell Lectureship at Toronto Western Hospital and Chair of the 2011 William J. Horsey Prize competition for clinical research by neurosurgery residents. Toronto, ON. Nov. 10-11, 2011.



The Deadline for the next Surgery Newsletter is May 11, 2012. All members and friends of the Department are invited to submit items, articles, pictures, ideas or announcements.

You may reach us by:

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