

UNIVERSITY OF TORONTO

# THE **surgical** spotlight



ON ALUMNI, FACULTY, RESIDENTS & FRIENDS

OF THE DEPARTMENT OF SURGERY

SPRING 2005

## Surgery is a Workmanship of Risk



Marg and Ralph Manktelow, World Champions

Ralph Manktelow's University Rounds on "The Workmanship of Risk and The Pursuit of Excellence" was one of the most thought-provoking and instructive lectures in recent memory. Our former chairman of Plastic Surgery used two of his hobbies, advanced woodworking and competitive rowing to illuminate his approach to reducing surgical error.

After showing us trees felled on his farm, milled and shaped into beautiful tables, beds and a sailboat, he led us through the analysis of "The Nature and Art of Workmanship"

by British architect and professor of furniture design David Pye. Pye defined a "workmanship of risk" as an object made by hand. "The quality of the result is at risk during the creation; it turns out slightly differently each time it is created."

Pye minimizes risk through knowledge, judgement, dexterity and care. In Ralph Manktelow's analysis, all of the former are well developed in surgery. He underlined the relationship of care to the minimization of error and pointed out that we do not study or talk about how to be careful. He looked

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at the pursuit of excellence in competitive sport as a source of information on maximizing care in surgery. Being careful continuously, during long difficult operations minimizes the errors that can occur during attention deficits. When he contrasted the culture of our operating rooms (“one interruption per stitch” during a microvascular anastomosis – “will you finish on time to do your next case?”, phone calls, pagers, questions from the office or the ward), a ripple of recognition and agreement was almost palpable in the audience.

Using interwoven videoclips of competitive sporting events, and the text from sports psychologist Terry Orlick’s *In Pursuit of Excellence*, Dr. Manktelow explored the mental preparation needed for excellence in athletic performance. The most striking feature of the elite and winning athlete’s performance is mental preparation, using imaging, focusing and positive thinking. Imaging consists of creating the event, including mental, physical and emotional aspects. EMG studies show that it includes a neuromuscular warm-up. Focusing is staying “in the zone” free of distraction. To function in the present moment, a Zen mindset, requires removing thoughts of past problems, future defeat, or victory. Positive thinking rids the athlete of all negative thoughts, comparisons with competitors or concerns about difficult goals. When asked how he averaged 32 points per game throughout his career, Michael Jordan, a master of mental preparation, said, “I just focus on scoring 8 points per quarter, and I do that four times.”

Dr. Manktelow then illustrated the use of the techniques of imaging, focusing and positive thinking in competitive rowing and during complex plastic surgical procedures. He recommended the study of these techniques as a means of improving the quality of our surgical operations which are in many ways workmanships of risk. The proof of the theory is in its successful application. Ralph’s developments in facial paralysis reconstruction are internationally recognized. Richard Reznick told us that Ralph and his wife Marg, who took up competitive rowing only in the past 15 years, are currently world champions in their racing class.

This inspiring lecture challenges us with clear examples. We can improve training and practice through mental preparation and focus on our workmanship of risk.

*M.M.*

### Stepping Stones - CFD

The Centre for Faculty Development is pleased to announce that the Spring 2005 Workshop registration schedule is now posted online at the following URL address:

<http://www.cfd.med.utoronto.ca/workshops.htm>.

Workshops:

- Teaching as a 3-Dimensional Art
- Understanding Learning Styles: The Road to More Effective Teaching
- Introduction to PowerPoint
- Intermediate / Advanced PowerPoint
- Planning and Implementing Effective Continuing Education (CE) Sessions
- Models of Online Instruction for Health Professional Education: Part I
- Interprofessional Education: Grounding Our Programs in Theory and Practice

These workshops are offered to all members of the Faculty of Medicine at the University of Toronto free of charge.

For questions/comments please contact Dawn Carpenter at [carpenterd@smh.toronto.on.ca](mailto:carpenterd@smh.toronto.on.ca) or by telephone at 416-864-6060 Ext. 6546.

## 25th Annual Assembly of General Surgeons and Residents

UNIVERSITY OF TORONTO

*Tovee Lecturer*

**Dr. Barbara Lee Bass**

*Professor of Surgery*

*University of Maryland*

*School of Medicine*

**Thursday, June 2, 2005**

**Sutton Place Hotel**

*955 Bay Street*

*Toronto, Ontario*

## New University Policy Defines Clinical Faculty Appointments and Dispute Resolution Mechanisms



Richard Reznick

In November, Governing Council of the University of Toronto approved the adoption of a new policy and procedures manual for clinical faculty. This will take effect July 1, 2005 and have significant impact on the structure of appointments to the Department, the designation of status of our faculty, the guidelines regarding practice plans and the access of clinical faculty to dispute resolution mechanisms for the purposes of grievance reviews and actual or apprehended breaches of academic freedom. The full text of the policy can be found at:

<http://www.utoronto.ca/govcncl/bac/details/ab/2004-05/aba20041111-04iii.pdf>.

The need for this policy stems from fundamental differences between clinical faculty and other members of the university academic community. First, virtually every faculty member in our department wears two hats, a hospital one and a university one. Second, we derive the lion's share of our income from employment as a self-professional. Third, our job descriptions vary greatly within and between groups, especially with regard to the time we have apportioned to a variety of clinical and academic activities.

Notwithstanding these fundamental differences between clinical faculty and other members of the university, we have, until now, been governed by the same policy and procedures as any university faculty; more appropriately put, there has been a policy vacuum with respect to clinical faculty.

## Clinical Faculty: Full time – Part time – Adjunct

In contrast to the past wherein the designation of a faculty member was largely governed by where their income was derived, the new faculty policy will assign status by job description. There will be three classifications.

### Full Time Clinical Faculty Appointment

A full-time clinical faculty member will be defined as an individual who has an active staff appointment in a fully affiliated teaching hospital. They must participate in a conforming practice plan. They need to engage in academic work for at least 80% of their professional working time. Outside clinical employment needs to be sanctioned by the departmental chair. They must have an approved academic job description. Full-time faculty will have access to the Grievance Review Panel and to the Academic Clinical Tribunal. They will be eligible for university perquisites.

It is my belief that the vast majority of individuals who currently enjoy full-time faculty status will continue as such. Two issues need further clarification. The first is the definition of academic work. Quoting from the policy, academic work refers to research, teaching, academic administration or clinical activity that involves University clinical teaching or is deemed by the Faculty to be directly in support of University academic work by other clinical faculty. Therefore the time an individual spends doing clinical work which sees them constantly interacting with students, residents, and fellows in the active engagement of passing on knowledge counts as academic work. This of course, is in addition to the time a faculty member spends on other forms of scholarly pursuit.

The second issue that requires clarification is the definition of a conforming practice plan. Again, quoting from the policy, a conforming practice plan is one that is acceptable to the Dean of Medicine and in general, consists of group practices, with distributed earnings that have economic mechanisms that support academic activity. Conforming practice plans, must be well understood, have equitable decision-making mechanisms for allocating shared resources, link to appropriate and explicit academic job descriptions, have multi-level internal dispute resolution mechanisms and

have explicit acceptance of the University's role in protecting academic freedom. As you know, our department has created a process to develop plans for department wide templates of conforming practice plans. In this regard, we have had two practice plan summits, and are approaching consensus on the majority of issues at hand. Many of the members of our department already have academic job descriptions. This is particularly true of individuals who were recruited in the last decade. For those who do not, we will be developing academic job descriptions for each and every full-time member in our department

### Part-Time Clinical Academic Appointment

A part-time clinical faculty member will be defined as an individual who has an active staff appointment in a fully affiliated teaching hospital, partially affiliated hospital, an affiliated community practice or a community clinic. They will engage in academic work between 20% and 80% of their professional working time. Outside clinical employment will often exist. They must have an approved academic job description. They may or may not participate in a conforming practice plan. They will have access to the Clinical Grievance Review Panel. Part-time clinical faculty will not be eligible for university perquisites.

### Adjunct Clinical Academic Appointment

An adjunct clinical faculty member will engage in academic work for less than 20% of his or her professional working time. They will likely work in a non-affiliated hospital, industry, or private practice. They will participate in academic programs in a limited manner. They will not need to be part of a conforming practice plan, will not have an academic job description, and will not be eligible for university perquisites.

### Dispute Resolution Mechanisms

An important component of the new policy is the mechanisms that have been put into play in the realm of dispute resolution. Three panels/committees will be established. The first is the clinical grievance review panel that will deal with grievances against a university official and deal with grievances with respect to denial of promotion. The second, the clinical relations com-

mittee will recommend revisions to clinical faculty policies and procedures before submission to University governance. The third, the academic clinical tribunal, will consider complaints regarding academic freedom. The issue of academic freedom is one that is at the central core of university's *raison d'être*. It is worth reviewing our working definition of this term. Academic freedom refers to the freedom to examine, question, teach, and learn, and the right to investigate, speculate, and comment without reference to prescribed doctrine, as well as the right to criticize the University and society at large. Specifically, and without limiting the above, academic freedom entitles eligible clinical faculty members to have University protection of this freedom in carrying out their academic activities, pursuing research and scholarship and in publishing or making public the results thereof, and freedom from institutional censorship. Academic freedom does not require neutrality on the part of the individual nor does it preclude commitment on the part of the individual. Rather academic freedom makes such commitment possible.

In my opinion, these changes are important and represent a fundamental change in the governance relationships of the University and our clinical faculty. Ostensibly for the first time, we now have a framework for faculty appointments, faculty designation, dispute resolution and protection with regards to academic freedom. The previous void in these structures has cost us dearly.

The new policy offers an opportunity to recognize clinical faculty as full status members of our university community, while at the same time takes into account our unique economic situation. It also brings an element of harmonization amongst our thirty-one hospital-based divisions, and affirms the collective desire to support new colleagues, to share in clinical work, and to promote academic scholarship both philosophically and financially.

*Richard K. Reznick*

*R.S. McLaughlin Professor and Chair*

## Transdisciplinary Spinal Cord Research Using Stem Cells and Nanotechnology



(left to right): Dr. Molly Shoichet, Dr. Cindi Morshead, Dr. Freda Miller, Dr. Charles Tator, Dr. Micheal Fehlings, Dr. Eva Sykova, Dr. Greg Stanisz, Dr. Keith Stewart, (front): Barbara Turnbull with her aide Bella

The CIHR has awarded Michael Fehlings and his Spinal Cord and Regenerative Medicine Team a five year New Emerging Team grant of 1.5 million dollars to study regenerative strategies for spinal cord injury repair that integrates stem cell biology, nanotechnology, bioengineering approaches and neurosurgical application. The funding for the CIHR-NET grant involves a partnership with the Ontario Neurotrauma Foundation. The team includes fellow neurosurgeon Charles Tator, stem cell biologists Cindi Morshead and Derek van der Kooy, nanotechnology and tissue engineer Molly Shoichet and Sunnybrook MRI specialist Greg Stanisz.

The team will take a three-pronged approach to spinal cord regeneration. The first prong uses nanotechnology to create guidance channels coated with stem cells and growth factors for nerve fibre regeneration. This will be especially helpful to guide regenerating neurons through areas of scarring. The second prong is a novel drug delivery system that allows neuroprotective agents to penetrate the blood brain barrier. Molly has developed a method for delivering drugs into the subarachnoid space using a fast gelling polymer that subsequently dissolves and leaves no scarring. The third prong uses the endogenous brain and spinal cord stem

cells recently described by Sheila Singh and Peter Dirks of our department. (*Nature* 2004 November 18;432:396-401) Growth factors will be used to stimulate neural stem cells in vivo and promote regeneration. Greg Stanisz uses gadolinium linked imaging to visualize and track the process in vivo. In cases of acute injury it is hoped this combination of protective drugs and enhanced regeneration will finally yield the Holy Grail of spinal research, reconnection of the spinal cord.

This team is unique in the world for its transdisciplinary thinking. Their discussions bring together engineering students, neurosurgery fellows and basic scientists, all thinking coherently and cross training in each others' labs. This approach will produce new transdisciplinary hybrids – such as PhD students trained in MRI technology, neurosurgery and bioengineering.

The project will be linked to the R. Samuel McLaughlin Centre for Molecular Medicine headed by Keith Stewart, which is providing matching funds of \$150 thousand per year for five years, access to their training awards, and interaction with other members. The Christopher Reeves Paralysis Foundation has also contributed a grant of \$150 thousand/yr for two years to Drs. Fehlings and Tator to facilitate translational clinical trials in spinal cord injury through The Spinal Program in the Krembil Neuroscience Centre at The Toronto Western Hospital. This program was named one of five centres of excellence in spinal cord injury research by the Christopher Reeve Paralysis Foundation

Looking beyond this grant, Michael is thinking about the ethics and potential risks of conducting clinical trials. Ethicist Abdallah Daar and other scholars at the McLaughlin Centre will advance this analysis of opportunities to create marketable product, work with manufacturers and to look at ways to engage government, commercial companies, and academic researchers in this exciting joint venture.

*M.M.*

## An Intensive Surgery Course to Precede Clerkship: The New Curriculum for the Surgical Clerk



David Backstein

In 1995 the Undergraduate program of the Faculty of Medicine at the University of Toronto underwent a major curricular revision. The “old curriculum” involved 3 years spent primarily in lectures and labs with limited clinical experience prior to the fourth year clinical clerkship. With the revised curriculum, medical

students began problem-based learning and had direct patient contact from the very start of medical school. The clerkship changed to two years (phase I and II) and formal teaching in surgery was almost completely decentralized to the academies.

With the recent accreditation process, the Department of Surgery was presented with the opportunity to re-examine the surgical clerkship’s strengths and weaknesses. Clearly the decentralized seminar series offers the benefits of small group teaching and the potential for a high degree of student-teacher interaction. Students however, expressed concerns regarding the inconsistency of content provided by different instructors, and a tendency for examinations to be focused on different materials than the seminars. Since the clerkship clinical experience runs concomitant with the seminar series, faculty have noted a lack of fundamental knowledge and skill in students. This has led to a gradually decreasing role for students on the wards, clinics and operating room. Clinical Clerks have often been relegated to observers and the supervised apprentice model has been eroded.

In an effort to improve the knowledge and skills of students *prior* to starting on the wards, we have developed a new curriculum for phase I (year 3 students).

Beginning with the next academic year, the first week of the surgical clerkship will be centralized for all students at the University of Toronto Surgical Skills Centre at Mount Sinai Hospital. A series of surgical skills sessions have been developed which will augment an integrated seminar series. It is hoped that by providing a concentrated week of seminars and skills sessions, students will hit the wards more prepared and eager to get involved. This should lead to increased utilization of clinical clerks in the OR and on the wards. By centralizing the first week we will be able to standardize the content of material that students receive and just as importantly, we will gain great flexibility in organizing what is taught and who teaches it. In addition, examination material will be more easily aligned with the material taught. Phase II students will continue to have an academy-based curriculum, keeping small groups sessions as an integral component of the surgical clerkship.

I look forward to updating you on the progress and success of the new curriculum in the coming years. The success of the new format will hinge on the ongoing enthusiasm and quality of instruction provided by our surgeons, nurses and residents. I thank the entire faculty in advance for your participation.

*David Backstein MD, MEd, FRCSC  
Director, Surgical Clerkship*

## Learning Surgery in Cuba

My darkened day would begin similarly to any other in Toronto. I would rise before the sun, collect my thoughts and stethoscope and head out towards the hospital to start another experience in general surgery. The difference was that this particular day took place in Havana, Cuba. The walk would lead up the steep hill of the Avenida de los Presidentes, in the central part of Havana, where colossal statues of General Simon de Bolivar or Dr. Salvador Allende would gaze down at the Habaneros shuffling off to work or school. After a brief stop at Frank’s goodie stand for a shot of sugar-cane sweetened coffee and a greasy treat with dubious ingredients, we would bid farewell to him, his wife-with-the-kidney-transplant and the chatty other regulars. The

daily quest would then continue upwards towards the Hospital General Calixto Garcia, opposite the University of Havana's main campus, for my one month elective in general surgery.

For the past 15 years Cuba has been going through what is known euphemistically as the "Special Period" meaning extreme economic duress as trade with the then Soviet Union evaporated. This inevitably led to a loss of 75% of yearly imports and a reduction in the Gross Domestic Product by 50%. Having studied for a year in Havana ten years prior, I could easily see substantial economic improvements since the days of Chinese bicycles, 17-hour blackouts and forced vegetarianism. Now the streets are bustling with Chevys from the 50's, or more recently Toyotas and Peugeots, thanks to the doctors-for-petroleum exchange with Venezuela. Peso-priced meat is also more available for purchase and renovations of various building complexes are underway. This included the 108-year-old "Calixto" hospital which recently underwent the overhauling of their Emergency Department, while the dilapidated operating rooms desperately wait for their turn. One of the staff surgeons, Dr. Pedro Rodriguez Oropesa, explained that the Cubans are facing both an external and internal blockade. One is thanks to the US government which, over the past 44 years, has been estimated at costing the island over \$60 billion dollars, severely limiting the availability of food, medications, medical technology and leading to death<sup>1,2</sup>. Cubans will also describe an internal blockade of local incompetence. They feel enlightened by elaborate intellectual concepts yet remain stuck in a cyclical environment of material poverty and daily frustrations. But the work of the hospital carries on.

Each morning begins with the ceremonious "entrega de guardia" or sign-over from the last night of call. Beginning early in the Dean's amphitheatre, both medicine and surgery staff merge to discuss the clinical conundra of the previous night. The seas then part as the surgical team on call regroup with their residents and medical students to formally review the 56 patients that were attended to over the past 24 hours. This can include analyses of the 6 major surgeries and 14 minor interventions performed while Havana slept. The radiology is scrutinized, questions posed and interventions

challenged and defended. Like daily morbidity & mortality rounds. No matter how many hurricanes or natural disasters strike the Caribbean, sign-over at the Calixto remains a constant in this universe.

My senior resident is the bright and talented Alfred Twumasi, who, as a young Ghanaian from a rural town wanting to study medicine (a financial impossibility at home) was offered the possibility of a full scholarship, plus stipend, to do so on an island called Cuba. Like thousands of foreign students before him, Spanish lessons evolved into medicine lectures leading to a residency in general surgery. His current concerns oscillate between his expectant wife, who is a nurse also from the Calixto, his thesis, and the impending final residency exams. The latter entail one grueling week of a combination of oral case presentations, one observed major surgery and another oral & written final exam – all open to the scrutiny of his colleagues, students and mentors. Alfred's preoccupations also inevitably tend to drift



Dr. Alfred Twumasi with wife Kenia celebrating Alfred's General Surgery Fellowship Exam results (honours with distinction).

towards his motherland. Ghana's initial fervor of the early 90's for a state-run system of health and education (based in large part on the Cuban model), was crushed when the country obediently morphed into a private-for-profit medical construct under strict control of the International Monetary Fund<sup>3</sup>. This transformation was paralleled by many other African countries as well in the name of 'development'. If patients cannot afford intravenous fluids or suture material, they are not treated surgically and the outcomes are as predictable as for those with HIV.

In Havana, pathology seen on call can be classified into three branches – complications of peptic ulcer disease, penetrating trauma (knife or machete wounds, never firearms, lots of rum), or gynecologic complaints. To graduate as a general surgeon in Cuba, one is expected to be as competent in performing a Jaboulay & truncal vagotomy, managing trauma, or operating on a ruptured ectopic pregnancy, as one is in diagnosing a bedside Chiladiti's syndrome or knowing the Asian parasite responsible for biliary colic. In the early morning hours of call, over another laparotomy, the staff surgeons will start to reminisce about their "internationalist missions" abroad. Abroad for a Cuban means to the forgotten countries and lands of Yemen, Western Sahara or Laos, or perhaps to South Africa, Angola, Nicaragua or Haiti. Abroad is where the majority of the world's peoples live and struggle to survive, where real poverty exists. This is why since 1998, 7150 Cuban physicians have worked in close to 30 countries (with thousands



Cuban physician Dr. Eliecer Hernandez is attending to a young woman who is 20 weeks pregnant with abdominal pain in a poor barrio in Caracas, Venezuela.

more in 67 countries in the years before), proportionally equivalent to the U.S. sending 175, 000 doctors abroad.<sup>4, 5</sup> They offer medical services to 17 million Venezuelans, provide up to 75% of the medical care in Haiti, and are helping out with tsunami relief simply because Cuban health care professionals were already there. Dedicating two years of one's professional career towards "South-South Solidarity" is a source of pride for a Cuban physician, and expected from those in surgery.

The converse also holds true. When hurricane Mitch claimed more than 10,000 lives in 1998 throughout Central America, resource-poor Cuba's response was to build a medical school. The ELAM, or Latin American School of Medicine, was established to allow for 8 000 students from 60 ethnic groups and 27 countries to study medicine, with free room, board, tuition and stipend provided. This has been the Cuban system for the past four decades. Ironically, or perhaps not, 88 of those students are from the U.S. with 85% being minorities and 73% female<sup>5</sup>. They have to adhere to the same commitment as all the others, to return to serve their poor U.S. neighborhoods of Harlem or East L.A. from whence they came. This led to a diverse group of medical students on our surgical team indeed, with keen Isaac from Colombia, Ernesto and Leticia from rural Honduras, Brazilian Angelica and spunky Oyenike from Lagos, Nigeria, to name a few. As everywhere, there always seemed to be at least a couple of German students caught in the melee as well. In addition to the fundamentals of surgery, these students were learning from each other and about the world, as was I.

As my elective was winding down, the festivities of the season began: Havana's 26th International Festival of New Latin American Cinema overlapped with the yearly International Jazz Festival. I mused over the contradictions inherent in this Caribbean yet Latin American island. I reflected on some of the paradoxes: the surgical gloves were only available in sizes 7 & 1/2 or 8, while a Trans-Anal Microscopic Surgery for rectal cancer was underway around the corner at the National Centre for Endoscopic Surgery, using equipment only available in Germany and Japan. I mused at how it is easier to get a diagnostic laparoscopy under local in a young woman with right lower quadrant pain, than it is to get an ultrasound or CT scan at 0300 hrs. Most

importantly, however, I reflected on the grace, dignity and humility with which the Cubans continuously work and thrive, with their unhesitant ability to share both knowledge, culture and bread with a new colleague and friend on their own soil or beyond.

*Tanya Zakrison*  
General Surgery Resident

- 1 Denial of Food and Medicine: The Impact Of The U.S. Embargo On The Health And Nutrition In Cuba"-An Executive Summary-American Association for World Health Report, Summary of Findings, March 1997
- 2 Barry M, Effect of the U.S. embargo and economic decline on health in Cuba. *Ann Intern Med.* 2000 Jan 18;132(2):151-4
- 3 [www.africaaction.org/action/sap0204.htm#25](http://www.africaaction.org/action/sap0204.htm#25)  
[www.who.int/cmhrefport](http://www.who.int/cmhrefport)
- 4 MINREX. Comprehensive health program. Havana, Cuba: Cooperation Department, Ministry of Foreign Relations, September 2004.
- 5 Mullan, F. Affirmative Action's Cuban Style, *N Engl J Med* 351; 26, 2004.

## “Empowering Surgeons with Quality Data”: The 2005 Kergin Lecture



Shukri Khuri empowers Chris Feindel, Tirone David and Bill Williams with data

Shukri Khuri, Chief of Cardiothoracic Surgery at the VA Boston Healthcare System and Professor of Surgery at Harvard Medical School delivered an outstanding

lecture honouring the memory of former University of Toronto department chairman Fred Kergin. Dr. Khuri praised Kergin's integrity, honesty and pursuit of truth. He also graciously announced that Harvard had awarded the Tosteson prize in medical education to Richard Reznick (as described in a nearby box.)

Dr. Khuri told us the success story of the Veterans' Administration hospitals and clinics. The transformation of the system is now legendary in health care. In response to a barrage of criticism from the media and a Congressional law that mandated the Veteran's Administration to report its surgical outcomes with risk adjustment, the leadership of the VA used a combination of data and skillful management of change to set a new standard for safety and efficiency which is now being exported to the private sector in the United States. Unimpeachable data was collected using nurse data managers at each hospital. Anonymized rankings were presented to surgical services and all their surgical specialties, which identified only where the particular hospital and specialty stood in the rankings. Outliers whose complication or mortality rate exceeded the expected value were given warnings, counseling, tools for assessment, periodic reports, recommendations and site-visits and considered for closure if they did not improve in subsequent assessments. Low outliers, on the other hand, were issued commendations and their best practices disseminated throughout the whole system. Since the inception of this National Surgical Quality Improvement Program (NSQIP), postoperative 30-day mortality from surgery in the VA has decreased by 32% and postoperative complications have decreased by 42%.

The leadership proved a point that Professor Khuri has been emphasizing in his public presentations, that the standards and their enforcement should come from the profession, not from industry. He cited the intervention of the Leapfrog Group, a business association of 150 companies in the United States that is trying to reduce the cost and improve the quality of medical care for their 50 million employees. Their CEOs are faced with a dramatic increase in costs of medical care from 2% of their budget in 1995 to 17% in 2003. They have decided to disenfranchise any hospital that does not measure up to their selected standards. These include

24-hour, 7-day-a-week staffing of intensive care units by certified intensivists, computer order entry, and surgical volume requirements (eg. 500 coronary bypass operations per year). Using the VA data, Professor Khuri refuted the claim that high volume is an absolute requirement for excellence, a widely accepted fallacy.

One of the striking observations in the VA system was the deleterious effect of mergers on mortality and complication rates. Using the example of the merger of the West Roxbury VA Medical Center, an affiliate of Harvard, and the Boston VA Medical Center, an affiliate of Boston University, he showed that it took three years to recover from the system disruptions inevitably linked to the merger. When the system of quality improvement that has become the trademark of the VA was exported to private hospitals, the cost and impact of complications could be calculated. A single major postoperative complication raised the median cost of hospital care for a surgical patient from \$4487.00 (US) to \$13,832.00. In the economic analysis, infectious complications raised the cost \$1398, cardiovascular \$7789 and respiratory complications \$52,466. A serum albumin level less than 3.5 grams percent was the most potent predictor of complications. The single most potent predictor of 30-day and long-term survival was the presence or absence of a single postoperative complication. One complication reduces long-term survival and increases mortality by 68%. A thorough discussion of this project is available in "The Department of Veterans Affairs' NSQIP: The First National, Validated, Outcome-Based, Risk-Adjusted, and Peer-Controlled Program for the Measurement and Enhancement of the Quality of Surgical Care" by S. Khuri et al. *Annals of Surgery* 1998;228(4):491-507.

Dr. Khuri was born in Palestine, raised in Lebanon, received his medical education at the American University of Beirut, his training in research at Johns Hopkins, and his surgical training at the Mayo Clinic in a program established by the leading cardiothoracic surgical scholar of his generation, John Kirklin. His subsequent career has been spent improving the VA system while practicing within the Harvard family of hospitals. With his colleagues he has brought about a conceptual and practical system revision, which will have a lasting impact on health care systems throughout the world.

His Kergin Lecture was delivered with the scholarship, grace and humility for which he has earned the respect of the international surgical community.

*M.M.*

## Richard Reznick Wins Harvard's Tosteson Award

The Tosteson Award for Leadership in Medical Education is presented to an individual whose leadership has brought about significant innovation or improvement in undergraduate and/or graduate medical education. As recipient, Dr. Reznick will deliver the keynote address at Millennium Conference 2005: Medical Simulation – Theory and Practice on April 29, 2005.

The Tosteson Award honours Dr. Daniel C. Tosteson, whose distinguished leadership as Dean of the Faculty at Harvard Medical School brought about the New Pathway in General Medical Education. Dr. Tosteson is also the co-founder, of the Carl J. Shapiro Institute for Education and Research at Harvard Medical School and Beth Israel Deaconess Medical Center, an independent non-profit organization which supports physician training and innovative medical research.

## ALUMNI NEWS

### Major gift from a grateful surgical alumnus



Manaf Alazzawi

As a plastic surgeon Manaf Alazzawi has witnessed both life's tragedies and miracles. Recently, he was a key member of the medical team at King Fahad National Guard Hospital in Saudi Arabia that successfully separated conjoined twins.

Dr. Alazzawi, who completed eight years of residency and fellowship training in Plastic Surgery at U of T in 1997, fondly remembers his time in Canada. To commemorate his studies and assist future specialists, he has donated \$275,000 to endow the Alazzawi Fund in Plastic Surgery in the Department of Surgery, which will support research, post-doctoral fellowships and faculty recruitment.

"In Arabic we have a proverb that roughly means: I am forever a servant for any person that teaches me how to write, if only one letter of the alphabet," says Dr. Alazzawi. "U of T taught me a way of life and I will always feel indebted to the university."

Dr. Richard Reznick, Chair of the Department of Surgery, says U of T owes a debt of gratitude to its former student, too. "Dr. Alazzawi's generous gift will provide funds to support our current academic priorities," he says.

Since leaving U of T, Dr. Alazzawi has applied what he learned in Canada to his work at hospitals within the Saudi Kingdom, and he is currently head of plastic surgery at King Abdulaziz Medical City. "In Canada, I saw what medical care should be," he explains. "It made me a better person. I learned to work hard and I came back to Saudi Arabia well equipped to deal with any medical challenge."

Dr. Alazzawi says his pledge is the beginning of a long relationship with U of T. "I hope to increase my gift over time to enable the division to maintain its superb capabilities and move forward," he says. "It pleases me very much that I have established something permanent in my beloved department."

*Rebecca Davies*  
Senior Development Officer

*Surgical alumni and current, former and retired faculty continued to generously support the Surgical Alumni Association through individual donations in the period of January 1, 2003 to December 31, 2004. Priority areas for support were the Surgical Alumni Fellowship, the John L. Provan Fellowship, the Martin Barkin Chair in Urological Research and the Dr. Bernard and Ryna Langer Chair in General Surgery. The Surgical Alumni Association and the Department of Surgery recognize our benefactors with enduring gratitude.*

#### **\$100,000+**

Manaf Alazzawi  
Martin Barkin  
The Bernard Langer Family and  
Jack Langer/Manson Family  
Donation  
Draxis Health Inc.  
(through Martin Barkin)

#### **\$25,000 - \$99,999**

Jack Barkin

#### **\$10,000 - \$24,999**

Ernest E. Beecherl  
John H. Wedge

#### **\$5,000-\$9,999**

Ravi S. Chari  
Zane Cohen

Bing Siang Gan  
Allan Gross  
W. Scott Helton  
Samuel V. Lichtenstein  
Robin R. Richards  
Society of Urologic Surgeons of  
Ontario (through Allan Toguri)  
James P. Waddell  
David E. Wesson

**\$1,000 - \$4,999**

Emmanuel Abara  
 Allan Abramovitch  
 Benjamin Alman  
 Milad Barsoum  
 Gilles Beauchamp  
 Robert S. Bell  
 Maurice Bent  
 Massey Beveridge  
 Earl R. Bogoch  
 John Bohnen  
 Michael Borger  
 Roger J. Buckley  
 Wayne W. Carman  
 Mark Cattral  
 George Christakis  
 Stephen W. Chung  
 Pierre-Alain Clavien  
 Gideon Cohen  
 William Cole  
 Peter O. Crassweller  
 James M. Drake  
 William R. Drucker  
 Jaime Escallon  
 John and Elizabeth Evans Fund of  
 the San Antonio Area Foundation  
 J. F. Ross Fleming  
 Michael H. Ford  
 Arnis Freiberg  
 Stephen Fremes  
 Steven Gallinger  
 Michael R. Goldberg  
 Bernard S. Goldman  
 Brent Graham  
 David R. Grant  
 Paul D. Greig  
 Robert N. Gryfe  
 John Hambley  
 W. Robert Harris  
 Jeremy P. Hatch  
 Douglas Hedden  
 Andrew Howard  
 Alan Hudson  
 Robert D. Jeffs  
 Antoine Khoury

Irving H. Koven  
 Peter Kuechler  
 David Latter  
 Peter W. K. Lau  
 Wey Leong  
 William K. Lindsay  
 Joan Elizabeth Lipa  
 Helen MacRae  
 Susan MacKinnon  
 John Marshall  
 J. Andrea McCart  
 David McCready  
 Ian D. McGilvray  
 Martin McKneally  
 Robin S. McLeod  
 Thomas P. Morley  
 Paul J. Muller  
 Unni Gopalakrishnan Narayanan  
 Peter Neligan  
 Emil C. Orsini  
 Shirish C. Patel  
 G. Alexander Patterson  
 Charles Peniston  
 Todd P. Penner  
 Walter Peters  
 Majid Rahimifar  
 Kundavaram N. Reddy  
 Michael Jan Reedijk  
 Benjamin Reichstein  
 Richard K. Reznick  
 Lorne Rotstein  
 Ori Rotstein  
 Barry Rubin  
 James T. Rutka  
 Robert B. Salter  
 John Scarrow  
 H. P. Von Schroeder  
 Hugh E. Scully  
 Daniel Shoskes  
 Tim R. Sproule  
 Hartley S. Stern  
 Martin C. Stewart  
 Carol Swallow  
 Charles H. Tator  
 Bryce Taylor

David R. Urbach  
 Thomas K. Waddell  
 Neil A. Watters  
 Dana F. Wilson  
 Donald R. Wilson  
 James G. Wright

**\$500 - \$999**

Dimitri John Anastakis  
 J. Brian Boyd  
 Peter W. Bray  
 Alexander Dagum  
 Nancy K. Down  
 Linda T. Dvali  
 Amr W. Elmaraghy  
 William P. Finn  
 William N. Fitzgerald  
 Noelle Grace  
 Richard M. Holtby  
 Michael Kreidstein  
 Irving Lipton  
 Ralph T. Manktelow  
 Edward P. McDougall  
 Michael D. McKee  
 Donna I. McRitchie  
 William Monk  
 C. Barber Mueller  
 Susumu Ohara  
 Masayoshi Ohi  
 William J. Prost  
 David J. Scott  
 Steven M. Strasberg  
 Terrill E. Theman  
 Richard D. Weisel  
 Patrick J. Whelan

**up to \$499**

Jeffrey Barkun  
 N. Peter Blair  
 Alan W. Carrie  
 Leo Chaikof  
 Robert W. Cram  
 Elijah Dixon  
 Peter Ehrlich  
 Robert H. Fielden  
 Pierre Forcier

Norman E. Fremes  
Leonard D. Gaum  
Anand Ghanekar  
Stuart B. Goodman  
Raymond O. Heimbecker  
Adel Kebaish  
Phillip G. Klotz  
William Kuzon  
Hugh Lawrence  
Toh-Bin Lim  
Norton H. Lithwick  
Sarvesh Logsetty  
Edmond B. MacFarlane

D. R. Mackenzie  
Robert Marx  
Jonathan L. Meakins  
Borna Meisami-Fard  
Jean-Claude Menard  
Ernest G. Meyer  
J. E. Mullens  
Masayuki Obatake  
Stephen E. O'Brien  
Norman Y. Otsuka  
David M. Overman  
Marven Palmer  
Richard H. Railton

Irving B. Rosen  
Robert L. Ruderman  
Richard S. Schenk  
Edward D. Simmons  
Norman W. Struthers  
Hugh Thomson  
Laura Tosi  
Apostolos Tountas  
George Trusler  
Bruce S. Wells  
Donald R. Welsh  
Christine Young  
Ronald Zuker

## Ingenuity, Innovation and Intuition: Remembering Bill Lougheed



William MacMurray  
Lougheed

“Uncle Bill” died September 30, 2004, after a lingering illness. He was predeceased by his wife of 49 years, Grace, and leaves behind his children Stoney, Bill, George, Joey and Bubba, and his partner Margot, to say nothing of the scores of neurosurgical trainees upon whom he had enormous impact.

Bill graduated from the UofT medical school in 1947, the same year that Professor William E. Gallie retired from the Faculty of Medicine. By then the principles of the Department of Surgery’s Gallie Course were firmly etched and Bill Lougheed proved to be an exemplary product of the department’s postgraduate training system. Gallie believed that each resident should explore the basic sciences and to that end Bill was influenced at one point by one of the most imaginative and innovative general surgeons of his time, Gordon Murray, of whom he often spoke. Subsequently his interest in the use of hypothermia involved working with William Bigelow at the

Toronto General who legend has it, tried to persuade Bill to forget about neurosurgery and become a cardiac surgeon. But Kenneth McKenzie appears to have been the primary motivator for Bill to pursue a neurosurgical career that would direct his lifelong dedication to the intellectual challenge of the neurological examination and diagnosis, and the technical aspects of our specialty, for which Bill’s flair was quite special. His memory of “KG” is that he “was not so much [as a planner] but as someone who was a great teacher and who was a great surgeon, and who had the ability to come in [to the OR] and just stand there, or even assist you. He didn’t do it all himself nor leave you to do it.”<sup>21</sup> Many of us would say the same about Bill who took a great deal of pride watching us learn to do things ourselves, with our own hands. He was above all else one of our country’s greatest teachers of operative neurosurgery.

He flourished under Harry Botterell, who encouraged Bill to pursue an interest in the blood vessels of the brain, disorders of which Botterell considered solvable. Bill was a world pioneer in hypothermic brain protection from cerebral circulation arrest<sup>2</sup> and he became one of the world’s first, and certainly Canada’s first neurosurgeon, to bring the microscope into the operating theatre. Microneurosurgery was born. He helped design an innovative aneurysm clip for brain aneurysms, performed the world’s first long-vein artery bypass for the brain, and was one of the first practitioners of carotid endarterectomy. In his heyday he became nothing less than an international superstar in neurosurgery.

Bill loved training neurosurgeons at the University of Toronto especially the good ones, and to him we were all good ones. He stressed the value of pre-operative preparations and intra-operative organization. We were disciplined on the behaviour necessary for team work. He demanded that we show respect for all colleagues – the anaesthetist, surgical assistant, and scrub nurse in order to maximize the help they provide, maybe under difficult circumstances, and regardless of their experience, or the time of night, or how tired you were. Bill's relationship while assisting the residents during surgery also ran contrary to the norm, during the '60s and for a long while after. Residents were expected to show up on time, be demure and stand in awe while assisting the responsible surgeon. Bill's style instead was to act as the first assistant, to the resident. He quietly explained the anatomy and technical manoeuvres as the resident guided the blade deeper through the tissues. What most of us failed to recognize for months was that Bill deftly placed the retractor or suction or his own forceps in a position that opened up the anatomy and from there, the next course of action. He could make anyone look good, while maintaining his often heroic patience, and ensuring his usual expert technical result, but still leaving intact the resident's sense of pride and achievement!

Technical ingenuity, surgical innovation and clinical intuition were Bill's unique and remarkable talents. He thought like an engineer, and solved problems by thinking them through, rather than consulting precedent. He was a natural tinkerer and inventor, whether building a boat, setting up the early operating microscope, or solving a tough brain aneurysm problem. He was long on encouragement, but short on self-satisfaction. He rarely referred to his usual successful results, but rather talked mainly about his mistakes and failures and complications, so that we might avoid them. His own sensitivity revealed itself on occasion in a certain sullen and terse behaviour, but never acrimony. He felt deeply for his patients and it was always plain when he had been injured by a poor outcome. A good surgeon must have a bad conscience, he once explained.

Each of us loved Bill for a variety of reasons, such as memories of the gravelly voice, the quiet chuckle, the teaching sessions in D OR that always seemed to reach their zenith at 3:30 in the morning and were fuelled by a cigarette and several cups of cold coffee, eyes that

glazed over when he talked about Go Home Bay, and perhaps most of all, the sound of his scuffling shoes coming down the corridor toward D OR late at night, while the residents waited for his soothing confidence to walk through the swinging doors. But it was not just that he taught us how to be neurosurgeons. Bill Lougheed was our friend, and a mischievous, fun-loving character, bigger than life and bursting with energy. His chuckle soared on one occasion when he told of an incident involving a food service truck driver who regularly annoyed Bill by taking advantage of his assigned parking spot behind the TGH ER. He related how he had outsmarted the miscreant delivery man because he let the air out of one of the truck's front tires. And, to be complete, the diagonally opposite rear tire as well!

Bill Lougheed was proud of all of us. He taught us how to act in the operating room, to resist the sometimes powerful temptation to impugn the reputation of other surgeons in building our own, to be honest about surgical results and constantly, to think about how to improve, and to be organized and efficient in the operating room, and out. His life ended knowing he held the affection, loyalty and respect of several generations of men and women he helped become neurosurgeons. And his legacy will live on in the little bit of Bill that all of his former residents carry around with them, in the care they provide, and the teaching they do. And Bill's spirit at the University of Toronto is manifest so very importantly in the post-graduate Lougheed Microsurgical Course, established in his honour years ago. This semi-annual week long endeavour is provided for and attended by all Canadian neurosurgery residents. All of these things were far more important to Bill than international stardom.

- 1 Morley TP (ed). *Kenneth George McKenzie. 1892-1964*. Toronto: Fitzhenry & Whiteside, 2004, pp 57-58.
- 2 Lougheed WM, Sweet WH, White JC, et al: The use of hypothermia in the treatment of cerebral vascular lesions. *J Neurosurg* 1955; 12:240-255.

*J. Max Findlay, Division of Neurosurgery,  
University of Alberta*

*Robin P. Humphreys, Division of Neurosurgery, Alumni*

*M. Christopher Wallace, Program Director,  
Division of Neurosurgery*

## RECENT HIGH IMPACT PUBLICATIONS FROM OUR FACULTY

### Stem Cells From the Brain, and Radial Artery Grafts to the Coronaries

This is the first of a new feature introduced in *The Surgical Spotlight*, in which we will highlight recent research publications by our faculty members.

Nimesh Desai, Stephen Fremes, and colleagues (Division of Cardiac Surgery, Sunnybrook and Women's College Health Sciences Centre), reported on the results of a randomized comparison of radial-artery and saphenous-vein coronary bypass grafts in the *New England Journal of Medicine* [2004 November 25; 351(22):2302-2309].

They performed a randomized trial in which 561 patients at 13 centres were enrolled, comparing the use of a radial-artery graft with a saphenous-vein graft to bypass the coronary vessels. The study found that radial-artery grafts are associated with a lower rate of graft occlusion at one year than are saphenous-vein grafts, and concluded that radial-artery grafts should preferentially be used for target vessels with high-grade lesions. These results will be used to improve outcome in patients undergoing coronary artery bypass surgery. Eric Cohen, David Naylor, and the Radial Artery Patency Study Investigators were co-authors on the study. Participating centres in this work include St. Michael's Hospital and the Toronto General Hospital, University Health Network.

Sheila Singh, Peter Dirks, and colleagues (Division of Neurosurgery, The Hospital for Sick Children), reported on a study that confirmed that brain tumours originate from cancer stem cells and that these stem cells fuel and maintain tumour growth. This work was reported in the journal *Nature* [2004 November 18; 432: 396-401].

Their study confirmed that a small number of cancer stem cells initiates and maintains human brain tumour growth using a mouse model. It was the first such demonstration in a solid tumour, extending principles from hematopoietic malignancies to a larger group of

cancers. Theoretically, if one could eradicate the stem cell population, such malignancies would be cured. As such, this work opens up exciting new treatment possibilities by targeting the unique biologic characteristics of the population of stem cells.

Other members of the research team included Drs. Cynthia Hawkins, Ian Clarke, Takuichiro Hide and Mark Henkelman (The Hospital for Sick Children), Drs. Jeremy Squire and Jane Bayani (Ontario Cancer Institute), and Dr. Michael Cusimano (St. Michael's Hospital).

Nimesh Desai and Sheila Singh are members of the Surgeon Scientist Program, and we are looking forward to hearing about their future accomplishments. The publication of these studies in the *New England Journal of Medicine* and in *Nature* is a fantastic accomplishment and a testament to the excellent work by Drs. Desai, Singh, Fremes and Dirks.

If you have upcoming publications of work that you would like to share with the staff in this new feature of the *Surgical Spotlight*, please email Val Cabral at [val.cabral@sickkids.ca](mailto:val.cabral@sickkids.ca).

*Benjamin Alman*  
Vice Chair Research

## SCIENTISTS IN SURGERY



William Hutchison

Will Hutchison is currently an Associate Professor in Surgery and Physiology and a Senior Scientist at the Toronto Western Research Institute. He was first

appointed to our department in 1996 to carry out intra-operative microelectrode recording in various cortical and subcortical structures, predominantly for movement disorders surgery.

A Toronto native, Bill did his undergraduate BSc at Trinity College, University of Toronto and then went on to a MSc in Pharmacology with Dr. Harold Kalant. At this point, he decided to take a PhD scholarship and study in Canberra, Australia in a lab founded by the Nobel laureate Sir John Eccles. There he studied substance P release within the cat spinal cord using a novel antibody microprobe technique.

In 1990, he crossed the pond again to Germany, taking up a Humboldt Scholarship to study thalamic neurophysiology of inflammation pain. He returned home to Toronto in 1992 to work with Prof. Jonathan Dostrovsky on neurophysiology of pain and temperature in animal models. He also participated in thalamic surgical procedures for tremor and pain working with Dr. Ron Tasker, who was a much admired family friend. Bill's discovery of the first cortical pain neurons in the cingulate cortex was published in *Nature Neuroscience* and on the front page of the *Globe and Mail*. This discovery involved the development of basic research describing the alterations in basal ganglia neurophysiology with Parkinson's disease, dystonia and other movement disorders. Bill continues work in this area with the addition of a basic animal lab to study both rodent and non-human primate models of Parkinson's disease. Recently Bill has pursued interests in the oculomotor area, drawing labs with excellent expertise and skills into the movement disorders field to shed light on mechanism of action of deep brain stimulation.

*Approximately 15% of our surgical faculty are individuals who are non-MDs and work as full-time scientists. These individuals are significant contributors to the research effort of our Department. This section will endeavour to profile excellence in research among the scientists in our Department.*

**Val Cabral**  
Research Program Coordinator

## NEW STAFF

The Department of Surgery warmly welcomes the following individuals who have joined our Department.

### Marc de Perrot



The Division of Thoracic Surgery is pleased to announce that Dr. Marc de Perrot has joined the faculty as of January 1, 2005 as an Active Staff surgeon at UHN and Assistant Professor of Surgery at the University of Toronto.

Marc is a graduate of the University of Geneva, Switzerland. He completed his Master of Science Degree in the Thoracic Surgery Research Laboratory then served as Clinical Fellow in Thoracic Surgery and Lung Transplant Fellow in the Thoracic Surgery Training Program at the University of Toronto. He recently completed an Oncology Fellowship at Hopital Marie-Lannelongue in Paris, France under Dr. Philippe Dartevelle, who is widely recognized as one of the leading thoracic surgical oncologists in the world. Marc will focus his clinical activities on thoracic oncology and provide clinical coverage of the lung transplantation service. His research will be translational, working with Michael Johnston on animal models of mesothelioma while conducting low dose CT screening for mesothelioma in asymptomatic individuals who have been exposed to asbestos. Research subjects will be recruited through unions in Sarnia, Ontario where assiduous tracking of exposure is a high priority. His therapeutic research in patients with proven mesothelioma will explore immunotherapy using high dose cytokines in the pleural space. T cells recovered from mediastinal nodes and from within resected tumours will be isolated, stimulated and reinfused to attack the tumour or break tolerance to its presence. This line of research has proven effective in melanoma and some urological tumours. His research will be conducted in collaboration with Ly Zhang who joined him in his thesis work in the Surgeon Scientist Program.

In an interesting new clinical program Marc will introduce and develop thromboendarterectomy for

chronic thromboembolic disease of the pulmonary artery. Such patients are often referred for lung transplantation, but many can be cured by thrombus excision under total circulatory arrest.

When he is not operating or conducting research, Marc enjoys opera, theatre, tennis and sailing in Toronto, a city he praises for its safety, urban sophistication and cultural resources.

*Martin McKneally and  
Shaf Keshavjee, Division Chair, Thoracic Surgery*



### Antonio Finelli

Tony is a graduate of the University of Toronto Urology Residency Program in 2003. During his training he also successfully completed the Surgeon Scientist Program. He obtained his MSc with his project on infection in peritoneal dialysis catheters in

experimental animals.

After his residency he completed an Advanced Laparoscopy Fellowship with Dr. Inderbir Gill at the Cleveland Clinic Foundation, Glicksman Urological Institute. Upon his return to Toronto he was given the rank of Assistant Professor and will be a Surgeon Investigator.

Tony's responsibility will be to set up the advanced urologic laparoscopy program at UHN-PMH. He has already started to perform laparoscopic radical prostatectomies. His initial investigative project will involve looking at the feasibility of laparoscopic versus open radical prostatectomy. He has excellent collaboration with the Uro-oncology group at PMH and basic support from the clinical trials and epidemiologic infrastructure at PMG and the UHN. He has also enrolled in the Clinical Epidemiology Masters Program at the University of Toronto.

Tony has received state-of-the-art training in advanced urologic laparoscopy and as such is a very welcome addition to the Division of Urology.

*Sender Herschorn  
Division Chair, Urology*



### Sevan Hopyan

I am pleased to announce that Sevan Hopyan has joined the staff at the Hospital for Sick Children.

Sevan commenced his orthopaedic training at the University of Toronto on July 1st, 1995. He entered the Surgeon-Scientist

Program in 1997 under the supervision of Jay Wunder and Ben Alman. Over the course of his surgical-scientist training he obtained numerous personal support grants and research grants and obtained his PhD in July of 2001. He then completed his orthopaedic training at the University of Toronto obtaining his Fellowship in the Royal College of Surgeons of Canada in June of 2003. He left for Melbourne, Australia where he completed further fellowship training in paediatric orthopaedic surgery and oncology.

Over the course of his training Sevan won a number of awards the most significant of which may have been the Royal College Medal for Resident Research awarded him in June of 2003.

It has been my pleasure to have been associated with Sevan throughout his orthopaedic training and eventual recruitment to the Hospital for Sick Children. Throughout his training he was an exemplary resident and a perfect example of the benefits of the Surgeon-Scientist Program at the University of Toronto. His return to the Hospital for Sick Children will allow him to continue his research in the genetic aspects of musculoskeletal oncology as well bringing a tremendous benefit to the paediatric orthopaedic population at that hospital.

It is a pleasure for me to welcome Sevan back to Toronto and wish him every success in his career.

*James P. Waddell  
Division Chair, Orthopaedic Surgery*


 editor's column


Martin McKneally

The sports psychologists' techniques that help turn elite athletes into champions can be used to improve surgical performance. This intuitively appealing concept was convincingly presented to the Department in Ralph Manktelow's January Grand Rounds. I suspect his insightful recommendations will

have an impact on our residency education in a very short time.

One of the most appealing aspects of psychological conditioning is that it does not add substantially to training time, yet it enhances performance substantially. During practice, imaging and focus enhance intensity and technique. During performance, prior imaging of solutions allows us to fall almost automatically into the solution when a problem arises. This approach is used extensively in the airline industry; the cockpit team is bonded by brief preflight exercises, thinking through potential problems. "What will we do if one engine fails on take-off" is not a quiz question, but a preflight imaging exercise that is routine despite the rarity of the problem.

I believe our OR teams, often comprising people who are working together for the first time, could benefit from a similar exercise. If all of us think through how we'll manage failure of the oxygenator or loss of the airway, we will have focused our collection of professionals into a professional team. Musicians and pilots have asked me how we surgeons can perform without practice. I tell them that virtuoso skills and belief in the team's tacit knowledge of how to deal with crises is deeply embedded in our culture. Like many who heard Ralph's lecture, I'm now ready for a better approach.

Shukri Khuri is now leading the surgical world into systems improvement. Shukri has become the reference standard of surgical scholarship following the example of his mentor John Kirklin. His Veterans' Administration policies and techniques are being exported into the leading private hospitals in the United States, and may soon replace standards set by the Joint Commission on Accreditation of Health Care Organizations.

Michael Decter, the Chair of the Canadian Institute for Health Information, recently told me he now believes that the power of data alone is greatly overestimated. Michael published outcomes in CIHI reports extensively, even featuring them in *MacLean's* magazine, with little impact on patterns of practice. It was only when Bernie Langer and Alan Hudson started exerting their surgical leverage\* that complex cancer surgery stopped in hospitals underpowered to deal with its complications and high mortality. (\*Those who have worked with these surgeons will understand this term.)

Similarly, Khuri and his colleagues used leadership, enforceable recommendations, and closure of hypocompetent units to turn the VA system around. The larger community of Canadian surgeons, though we are not a system, should be able to use its professional leaders and leverage to optimize surgical care. The failure of surgery to safeguard our patients in the Winnipeg congenital heart surgery tragedy is an enduring example of system failure. As Shukri Khuri teaches us, we should not need others, neither the courts, the government, nor industry to set and monitor our professional standards.

On a cheerier note, we have received a generous gift from surgical alumnus Manaf Alazzawi. In his actions and his words Manaf personifies the gratitude we all feel toward the surgeons, nurses and patients who taught us during our training. Manaf recalls with affection the warm and respectful welcome and excellent education he received in our Department.

Ben Alman records some of our outstanding research publications, and Michael Fehlings' dynamic spinal cord program reports a spectacular and well deserved increase in funding.

His colleagues honor his life and career accomplishments as they bid farewell to Bill Loughheed, who clearly personified the ideal academic surgeon. Their eulogy reminds us of the values and traditions that make our Department great.

*Martin McKneally*  
Editor

## CORRESPONDENCE

Letters to the editor are welcome to keep the community informed of opinions, events and the activities of our surgeons, friends and alumni.

### **Dr. Pierre Forcier, Neurosurgery, Alumni**

“With Dr. Michel Lacerte (physiatrist, London, Ontario) I published a second edition of Independent Medical Examinations for Insurance and Legal Report (1st edition Butterworths had been written by Dr. Michael Hall, ortho).

### **Dr. Stuart Goodman, Orthopaedic Surgery, Alumni**

“On May 17, 2004 I was elected as a Fellow, Biomaterials Science and Engineering (FBSE) by the International Union of Societies for Biomaterials Science and Engineering.”

### **Dr. Don Welsh, General Surgery, Alumni**

“Almost completely retired. Still do occasional office examinations for Shouldice Hospital.”

### **Dr. William Finn, General Surgery, Alumni**

“Retired as Deputy Chief of Surgery and Head of Service of General Surgery Hamilton Health Sciences Corporation – General Campus. Superannuated from position of Associate Clinical Professor.”



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## HONOURS/AWARDS/ ACCOMPLISHMENTS

**Lorie Burrows** (Research) has received the 2004 Elsie Winifred Crann Memorial Trust Award in Medical Research.

**Abdallah Daar** (Research) has been awarded the 2005 Anthony Miller Award for Excellence in Research.

**Peter Dirks** (NeurSurg) received the 2005 Royal College Medal Award in Surgery. This has distinguished Peter as one of the brightest young surgical researchers in the world.

**Peter** was invited to join the CIHR Centres of Excellence Group on stem cells, the Stem Cell Network.

**Michael Fehlings** (NeurSurg) PI and co-applicants Eric Massicotte, Raja Rampersaud and Stephen Lewis of the Toronto Western Hospital Spinal Program have been awarded a three-year (\$300,000 US) AO Spine Center of Excellence Award from the AO International Foundation to Facilitate their educational and research endeavours.

**Michael** and **Alexander Velumian** (NeurSurg) won the 1st place Poster Award in the Basic Science category from the Heart and Stroke Foundation of Ontario for their poster titled: “Unlocking the Puzzle of Ischemic Spinal Cord Injury: Investigations of Oligodendrocyte-myelin-axonal Signalling” which was presented at the Heart and Stroke Clinical Update Conference in December 2004. This award included prize money in the amount of \$600.

**Michael** has also been:

- Elected to Active membership in the American Academy of Neurological Surgery.
- Appointed a member of the Medal Award in Surgery Subcommittee, Royal College of Physicians and Surgeons of Canada, 2005-2007.
- Appointed a member of the Research Project Management Committee, North American Spine Society (NASS), 2005.

- Appointed a member of the Scientific Advisory Board, International Collaboration on Repair Discoveries (ICORD) for the Genomic Analysis of Injury and Neuroprotection (GAIN) project 2005-2009.
- Appointed to the Board of Directors of ONE Spine, a non-profit organization whose mission is to optimize and unify education and research among neurological and orthopaedic spine surgeons in order to improve patient care.

**Fred Gentili** (NeurSurg) has been appointed to the Editorial Board of the journal: *Skull Base: An Interdisciplinary Approach*.

Fred has been appointed to the Evaluation Committee of the Royal College of Physicians and Surgeons of Canada.

**Howard Ginsberg** (NeurSurg) has been appointed as Assistant Professor of Engineering in the Institute of Biomaterials and Biomedical Engineering, University of Toronto.

**Ab Guha** (NeurSurg) was appointed as a member of the Scientific Advisory Board: Sontag Foundation, USA.

**Mojgan Hodaie** (NeurSurg) has been awarded \$10,000 from the 2004 Dean's Fund New Staff Competition for project titled: "Evaluation of Effective Stimulation Parameters for Seizure Control in Rats with Thalamic Deep Brain Stimulators, Using a Pilocarpine Model".

**Antoine Khoury** (UrolSurg) and **Anthony Cook** (Clinical Fellow Urol/Surg) were invited to Abu Dhabi's Al Mafraz Hospital in the United Arab Emirates to participate in the separation of 19-month old male Sudanese Pygopus conjoined twins. The procedure was performed on October 12, 2004 and took 15 hours, which included extensive pelvic and external genitalia reconstruction. The twins are recovering well.

**Kirk Lo** (UrolSurg) has received a \$40,000 Scholarship (2004-2005) from the Canadian Urologic Association Scholarship Fund (CUASF) for his research project: "A Novel Model for the Xenotransplantation of Fresh and Cryopreserved Testicular Tissues Using Immunodeficient NOD/SCID Mice".

**Andres Lozano** (NeurSurg) has been inducted into the American Academy of Neurological Surgery.

**Andres** has also been:

- Nominated President of the World Society for Stereotactic and Functional Neurosurgery, 2005-2009.
- Appointed to the International Executive Scientific Advisory Board, Michael J. Fox Foundation for Parkinson Research, 2005-2006.
- Appointed as Chair, Archives Committee, Movement Disorder Society, 2005-2007.
- Appointed to the Congress Scientific Program Committee (CSPC), Movement Disorder Society, 2005-2006.

**Hugh Scully** (CardSurg) has been named a Founding Fellow of the FIA Institute for Motorsport Safety, a Paris-based organization that will work to enhance the safety of motorsports worldwide. Fellowship is extended only to leading international experts in motorsport safety and related medical research.

**Michael Taylor** (NeurSurg) has been awarded \$10,000 from the 2004 Dean's Fund New Staff Competition for his project: "Genetic Events in the Initiation of Medulloblastoma".

**Michael** has also:

- Received the Best Individual Investigator Award for his presentation: "Genome Wide Approaches to Paediatric Ependymoma" at the Tumour Satellite Symposium of the AANS/CNS, San Francisco, CA, October 20-22, 2004.
- Been appointed to the Editorial Board of the *Journal of Neuro-oncology*.
- Received an award for the Best Paediatric Paper titled: "Site Specific Genetic Changes and Precursor Cells Define Distinct Molecular Subsets of Human Ependymoma" presented at the annual meeting of the Society for Neuro-oncology meeting held in Toronto, November 18-21, 2004.

**Alexander Veloumian** (NeurSurg) has been awarded \$10,000 from the 2004 Dean's Fund New Staff Competition for his project: "Pathophysiology of Oligodendroglial-axonal Interactions in Spinal Cord White Matter Injury"

**Nimesh Desai** (CardSurg Resident, Supervisor: Stephen Fremes) has received the Physicians' Services Incorporated Foundation Resident Award for his project: "A Randomized Comparison of Radial Artery and Saphenous Vein Coronary Bypass Grafts".

**Nimesh** is also the recipient of the Paul Cartier Resident Research Award by the Canadian Society of Cardiovascular Surgeons presented at the Canadian Cardiovascular Congress in Calgary last October for paper titled: "Competitive Flow Compromises Patency of Radial Artery Coronary Bypass Grafts: Analysis from the Radial Artery Patency Study".

**Bradley Jacobs** (NeurSurg Resident) won 2nd prize for the 2005 Thomas P. Morley Neurosurgical Resident Competition, February 15th, 2005.

**Karim Mukhida** (NeurSurg Resident) received the Margot Anderson Award at the recent meeting of the Congress of Neurological Surgeons, San Francisco, CA, October 19, 2004.

**Sheila Singh** (NeurSurg Resident) won 1st prize for the 2005 Thomas P. Morley Neurosurgical Resident Competition, February 15th, 2005.

**Jay Riva-Cambrin** (NeurSurg Resident) was the 1st prize winner of the Horsey Prize at the Botterell Lectureship, November 29th, 2004.

**Jay** also received the AANS Paediatric Section Hydrocephalus Association Award for the Best Resident Presentation on the topic of: "Hydrocephalus".

**Sarah Woodrow** (NeurSurg Resident) has won this year's Byron Cone Pevehouse Award. This will be presented to Sarah at the upcoming AANS Annual Meeting in New Orleans, April, 2005.

**Gelareh Zadeh** (NeurSurg Resident) was the 2nd prize winner of the William J. Horsey Prize during the Botterell Lectureship, November 29th, 2004.

**Artur Gevorgyan** (PlasSurg Research Fellow and MSc Student, Institute of Medical Science, Supervisor:

Christopher Forrest) has received a Ara Mooradian Scholarship from the University of Toronto School of Graduate Studies, awarded to a master's or doctoral student in any discipline of the Physical Sciences, Engineering, or Life Sciences, performing research in radioactivity.



## GRANTS & FELLOWSHIPS

**Michael Fehlings** (NeurSurg) PI and co-applicants Charles Tator, Cindi Morshead, Molly Shoichet, Derek van der Kooy and Grey Stanisz have been awarded a \$1.5 million grant over five years from the Canadian Institutes of Health Research New Emerging Teams Program for their project: "Regenerative Medicine Strategies for Spinal Cord Injury Repair: Integration of Stem Cell Biology, Nanotechnology, Bioengineering Approaches and Neurosurgical Application".

**Michael** PI and co-applicants Freda Miller, Cindi Morshead, Molly Shoichet and Derek van der Kooy are the recipients of a \$100,000 grant from the McLaughlin Centre for Molecular Medicine to study spinal cord injury repair.

**Michael** and **Charles Tator** (NeurSurg) have been awarded a \$149,600 US grant from the Christopher Reeve Paralysis Foundation for their participation in the North American Clinical Trials Network for the Treatment of Spinal Cord Injury.

**Ren-Ke Li** (Research) and co-applicant **Shafie Fazel** (CardSurg Resident) were recipients of a five-year grant-in-aid from the CIHR totalling \$738,075 for their project titled: "The Interplay of Stem Cells and Gthe Matrix in Myocardial Infarction: Shifting the Balance Toward Repair".

**Martin McKneally** (ThorSurg) and co-investigators Alex Levin, Dept. of Ophthalmology and Ross Upshur, Dept. of Family and Community Medicine have received a two-year Center for Excellence in Surgical Education, Research and Training Grant (CESERT)

from the Association for Surgical Education Foundation for their project: “The Formal and Informal Curriculum in Surgical Residency Bioethics Education”.

**Kenneth Pace** (UrolSurg) and co-investigators Greg Hare, Brian Blew, Robert Stewart and John Honey have been awarded a two-year Physician Services Incorporated Grant for \$43,000 per year for project titled: “Impact of Pneumoperitoneum on Renal Physiology”.

**James Rutka** (NeurSurg) received a one-year grant from Brainchild for his work entitled: “Vascular Endothelial Growth Factor Genetic Polymorphisms in Paediatric Brain Tumour Angiogenesis”.

**James** has also received a five-year grant from the CIHR for his work entitled: Role of cytoskeletal GTPases in Astrocytoma Motility.

**Nimesh Desai** (CardSurg Resident, Supervisor: Gideon Cohen) has received a PSI Foundation Resident Research Operating Grant for project titled: “Safety of Vacuum Assisted Venous Drainage for Cardiac Surgery”.

**Paul Fedak** (CardSurg Resident) and Dr. Butany, Pathology, have received a PSI Foundation Grant (\$19,000) for study titled: “Chronic Inflammation and MMP Expression in Ascending Aortic Aneurysms”.

**Cian O’Kelly** (NeurSurg Resident) is the recipient of a Johnson and Johnson Medical Products – Surgeon Scientist Fellowship for 2004-2005.

**Cian** has also received a three-year Research Fellowship Award from the Heart and Stroke Foundation of Canada.

**Muriel Brackstone** (Breast Surgical Oncology Fellow, Supervisor: Claire Holloway) has been awarded a 2004-2005 Canadian Breast Cancer Foundation Physician Fellowship Grant (\$69,000) for project titled: “Geographic Variability in Practice Patterns for Breast Cancer Diagnosis in Ontario”.

**Arthur Gevorgyan** (Research Fellow, Supervisor: Christopher Forrest) has received the Basic Research Grant Award, Plastic Surgery Education Foundation, for his project: “Apoptosis in Cultured Calvarial Cells Following Radiation”.

**Wade Gofton** (Wilson Centre for Research in Education Fellow, Supervisors: Adam Dubrowski and David Backstein) has been awarded a one year Royal College Grant (\$45,000) for his “Fellowship for Studies in Medical Education”.

**Baylis Vivek Joseph** (NeurSurg Spine Fellow) is the recipient of the 2005 Sonntag International Fellowship Award (\$5,000 US) from the AANS/CNS Joint Section on Disorders of the Spine and Peripheral Nerves, which will be presented at the annual meeting, March 11, 2005 in Phoenix, Arizona.

### Mount Sinai/UHN Trihospital Rounds

7:30-8:30 a.m., Mount Sinai Hospital, 14th Floor Classroom

Friday, April 8 2005 - Guest Speaker - Dr. Ron P. DeMatteo, Memorial Sloan Kettering Cancer Center, New York

Friday, April 29, 2005 - Dr. Robin McLeod, University Health Network (Professionalism in Surgery)

Friday, May 20, 2005 - Guest Speaker - Professor Michel Gagner, New York (The Rosen-Rasch Lecture in Endocrine Surgery)

Friday, May 27, 2005 - Dr. David Urbach, University Health Network

## 31st Gallie Day

Friday, May 6, 2005

The Liberty Grand Entertainment Complex

Our Department looks forward to continuing the wonderful tradition of celebrating its scientific achievements. This year there are several changes to the organization of Gallie Day and to the Gallie Day Competitions. The poster session and oral presentations will both be held at the Liberty Grand Entertainment Complex on May 6, 2005.

We have invited Dr. David N. Herndon as the Gordon Murray Lecturer this year.

Dr. Herndon is the Jesse H. Jones Distinguished Chair in Burn Surgery, University of Texas Medical Branch, Chief of Staff, Shriners Hospital for Children in Galveston, Texas. The topic of the symposium is "Wound Healing: Closing the Gap" A Symposium on Advances in Wound Healing. The panelists are:

Dr. Peter Ferguson, Division of Orthopaedic Surgery, Mount Sinai Hospital

Dr. Christopher McCulloch, Professor, Faculty of Dentistry, University of Toronto and Director, CIHR Group in Matrix Dynamics

Dr. John Semple, Division of Plastic Surgery, Sunnybrook & Women's College Health Sciences Centre and Director, Advanced Regenerative Tissue Engineering Centre

Dr. David Herndon, the Gordon Murray Lecturer.

Several awards will be given for oral and poster presentations including the Gallie Award, McMurrich Award, and the Wyeth-Ayerst Award. The Gallie Award is open to members of the Gallie training program (Surgeon Scientist Program), but the other awards are open to any trainee (residents, graduate students, post-doctoral fellows, undergraduate students, etc.) working with a PI who is a member of the Department of Surgery.

This new format will allow for the presentation of the wide range of research work in our Department to our entire faculty, and for recognition of research

performed by trainees from a wide range of backgrounds. Please encourage as many trainees as possible to present their research work at Gallie Day.

Please check the Department of Surgery website: [www.surg.med.utoronto.ca](http://www.surg.med.utoronto.ca), under Events, Gallie Day for details and updates.

### Contacts:

Gallie Day Poster session, competition and oral presentations: Val Cabral

Tel: 416-813-2178, Email: [val.cabral@sickkids.ca](mailto:val.cabral@sickkids.ca)

Gallie Day Gordon Murray Lecture, Symposium, Dinner: Helen Yarish

Tel: 416-978-2552, Email: [helen.yarish@utoronto.ca](mailto:helen.yarish@utoronto.ca)

The deadline for the Summer 2005 Surgery Newsletter is May 1, 2005.  
All members of the Department are invited to submit news items, articles,  
pictures, ideas or announcements. You may reach us by:

**voice mail: 416-978-8177, fax: 416-978-3928 or  
e-mail: [jean.defazio@utoronto.ca](mailto:jean.defazio@utoronto.ca)**

Please provide your name and telephone number so that we may contact  
you if we have any questions.

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