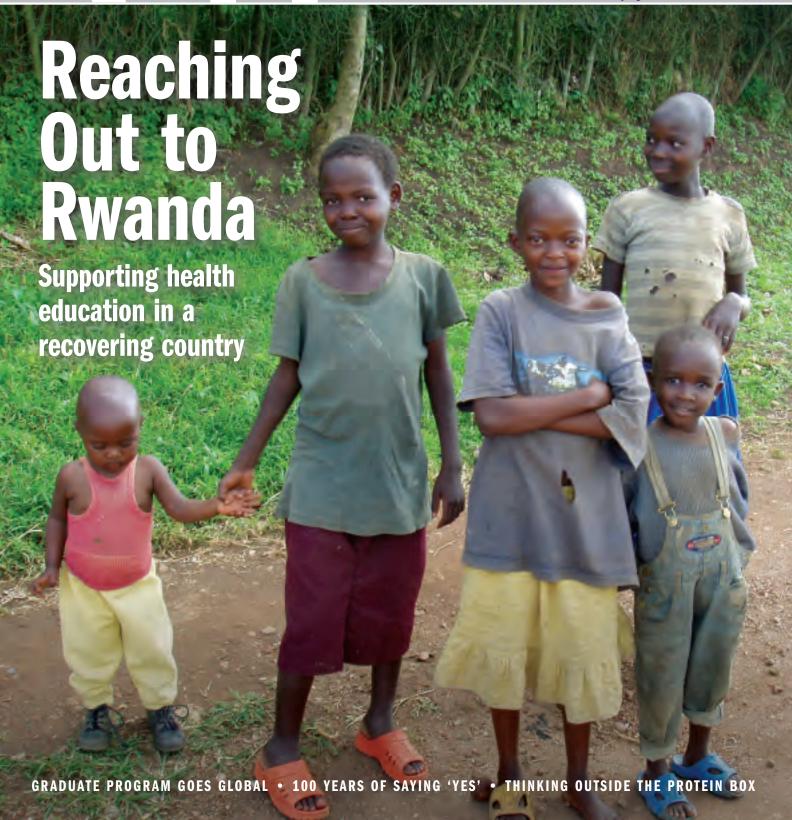


Issue Three Summer 2008

The University of Western Ontario







SHAPING THE FUTURE OF HEALTH CARE

Mission

The Schulich School of Medicine & Dentistry provides outstanding education within a research-intensive environment where tomorrow's physicians, dentists and health researchers learn to be socially responsible leaders in the advancement of human health.

Rapport

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On the cover:

Neighbourhood children on the street in Kigali, Rwanda. Read about Schulich Medicine & Dentistry's role in rebuilding Rwanda's health system on page 12. Photo courtesy David Cechetto

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Photo credit: Shawn Simpson

EXPANSION AND GROWTH PROPELS SCHOOL FORWARD

The 2007-08 academic year has been just about the busiest on record for Schulich Medicine & Dentistry.

On the education front, we have been actively preparing to launch our first, full distance education site. The Windsor Program will see the first 24 students begin their four-year MD program full-time in Windsor this September. We have implemented revised curriculum in the first two years of medicine to more closely align evaluation with integrated systems-based learning. We are preparing to embark upon a redesigned dental curriculum to include more clinical experience early on. And we have expanded graduate studies at the Masters and PhD levels by more than 11 per cent.

In research innovation and dissemination, Schulich Medicine & Dentistry continues its excellent track record and, in fact, had one of the highest success rates in recent history for Canadian Institutes of Health Research (CIHR) funding this year, far exceeding the national average. We also welcomed Robarts Research Institute into the Schulich and Western family. Thanks in part to this new relationship, Robarts continues to be an outstanding facility with world-class scientists – an environment that cultivates biomedical discovery that can lead to better treatments for people facing health challenges worldwide.

We have also been focused on increasing our international profile and role. A Global Health Task Force has been working to identify opportunities across the school for students and faculty to become involved in global health initiatives. Our cover story, *Rebuilding Health in Rwanda*, is a prime example of how we are developing a leadership role in this area.

Through all this change, our attention to quality and our commitment to maintaining outstanding education and research remains at the heart of what we do. And it is the hard work and dedication of students, faculty and staff who truly make this kind of change happen.

What I love about the School is that there are always more amazing stories to tell. *Rapport* 2008 contains just a few of them. We want to know - Do they resonate with you? Are there other topics, programs or projects you would like to hear more about? Is there something we can do differently to share our stories with you – our partners, alumni, faculty, staff and students? We welcome your feedback by emailing rapport@schulich.uwo.ca

Thank you for your continued interest and support of the School.

Sincerely,

Dr. Carol P. Herbert, Dean

Schulich Medicine & Dentistry Check-Up

Recent news and announcements from the School



Photo credit: Paul Mavne/Western News

Honorary degrees celebrate benefactor, medicine laureates

Seymour Schulich received an honorary Doctor of Laws degree at the May 16 medical convocation in recognition of his outstanding philanthropy to post-secondary education.

"The future of post-secondary education in Canada has been enriched enormously by the generosity of Seymour Schulich," said Western President Paul Davenport.

Schulich has invested more than \$220 million to several institutions including donations to Western, York's School of Business, Calgary's School of Engineering, McGill's Faculty of Music and the Technion – Israel Institute of Technology.

Also receiving honorary degrees this spring:

Dr. Paul Polak, MD'58, founder of the non-profit organization International Development Enterprises (IDE), which provides low-cost irrigation systems to rural farmers in eight developing countries and has helped more than three million families out of poverty.

Dr. Allan Lansing, MD'53, former President of the Hippocratic Council and Rhodes Scholar, whose career in cardiac surgery has earned him honours worldwide. Based in Louisville, Kentucky, Lansing pioneered a new form of heart surgery and has provided pediatric cardiac surgery in Central America and Eastern Europe through the Gift of Life Program.

Dr. Peter Fowler, long-time faculty member and founder of the world-renowned Fowler Kennedy Sport Medicine Clinic, is recognized for his groundbreaking contributions to orthopaedic surgery.

Windsor Program set to launch

The new Schulich School of Medicine & Dentistry – Windsor Program will launch in September 2008 with 24 students embarking upon their medical education for the first time as full-time students in Windsor.

The Windsor Program – a partnership between Western, the University of Windsor and the Windsor hospitals – will use videoconferencing technology to connect students in Windsor and London for lectures and other large group sessions. Clinical training and small group sessions will be provided through faculty at the University of Windsor, Hotel Dieu-Grace Hospital, and Windsor Regional Hospital. More than 60 Windsor faculty members have come forward to participate in teaching for the upcoming year.

A new Medical Education Building (MEB) on the University of Windsor campus will open in August 2008. Fitting with the Schulich patient-centred and ecosystem health curriculum, the building has a "human-centred design that addresses environmental, economic and social concerns."

Part of the Ontario-wide expansion of medical school spaces announced in 2006, the Windsor Program builds upon the success of the Southwestern Ontario Medical Education Network in training medical students in the region.



Photo credit: Kevin Kavanaugh

Stroke researcher to lead Robarts

John MacDonald, PhD, has been selected as the new Scientific Director for Robarts Research Institute.

One of Canada's preeminent stroke researchers, MacDonald joins Robarts from the University of Toronto where he served as Chair of the Department of Physiology from 2000 to 2006 and runs a research laboratory investigating the cellular basis of neurological conditions such as stroke, pain, Alzheimer's disease, and schizophrenia. He holds a PhD from the University of British Columbia and has trained at the University of St. Andrews, UK, McGill University, and the National Institutes of Health.

"John MacDonald is internationally recognized for his excellence as both a scholar and a leader," said Dr. Carol Herbert, Dean, Schulich School of Medicine & Dentistry. "We are fortunate indeed that he will be putting his energy and vision into building on Robarts' strong legacy of medical discoveries and advances in human health."



John MacDonald takes up the role of Robarts Scientific Director on July 1, 2008. Photo credit: Paul Mayne/Western News



Lifecycle Research Network

Schulich Medicine & Dentistry is taking a leadership role in the development of a new clinical research and education network in Southwestern Ontario.

The Lifecycle Research Network (LRN) is the realization of four years of planning and is poised to become an internationally recognized health research network. LRN is a coalition of the major health research organizations in Guelph, London, Waterloo and Windsor that will be a resource for studying and implementing cost-effective advances in health and chronic care, and will serve as a portal for health care innovations and technology development.

"We are in the right place at the right time and have the right people on board to make a profound impact," says Dr. Michael Strong, LRN Director and Professor and Co-Chair, Clinical Neurological Sciences, Schulich Medicine & Dentistry. "By investigating specific chronic diseases and focusing on the lifecycles of individuals, LRN can deliver dramatic improvements to health through prevention and early intervention."

Southwestern Ontario has disproportionately higher rates of chronic disease relative to other parts of the province and an aging population.

Taking children's health to the top

Canadian children can thank
Dr. K. Kellie Leitch, Chair/Chief
of Paediatric Surgery and Assistant
Dean, External at Schulich
Medicine & Dentistry, for taking a
stand on their behalf. In her role
as Canada's Advisor on Healthy
Children & Youth, Dr. Leitch
submitted an extensive report to
the Minister of Health in March
2008 calling for immediate action.



Canada's record on the health and wellness of children and youth is poor, ranking 12th out of 21 wealthy countries in the United Nations' rankings of child wellbeing. The 220-page report, *Reaching for the Top*, contains 95 recommendations to improve the health system and make Canada the number one place for a child to live and grow from a health perspective. Five key recommendations highlighted by Leitch include: developing a National Injury Prevention Strategy, establishing a Centre of Excellence on Childhood Obesity, improving Mental Health Services for children and youth, undertaking a Longitudinal Cohort Study to help understand environmental factors impacting children's health, and establishing a National Office of Child and Youth Health.

"When you work at a hospital with sick and injured children, you passionately want to improve these children's lives – and the lives of their families," says Leitch.

Appointed by Minister of Health Tony Clement in March, 2007, Leitch reviewed 253 programs and initiatives and met with over 800 stakeholders to evaluate existing children and youth health activities and programs. *Reaching for the Top* is now with the Minister of Health for consideration.

Graduate Program Goes Global

Focus on Ecosystem Health takes student to Kenya

by Kris Dundas



Abudi Awaysheh, graduate student in pathology, studied fish from Lake Naivasha (above) to test for toxins in the water. The 13-kilometre-wide lake in Africa's Great Rift Valley serves as the area's major source of drinking water. Photo courtesy Abudi Awaysheh

While pathology students might well be used to hands-on work in a lab, few have had the opportunity to work hands on in the field – especially one so far away as Kenya. Abudi Awaysheh, MSc candidate in environmental pathology, travelled to Kenya last fall as part of a new Ecosystem Health Graduate Program to work in the field – well actually – a lake.

Lake Naivasha is a fresh water shallow lake found in the Great Rift Valley and is one of the only sources of drinking water in the area, approximately 80 kilometres northwest of Nairobi. The rapid expansion of the floriculture industry around the lake has created potential health problems. The developing problems led William Shivoga at Kenya's Egerton University to first contact Western in 2006.

"The initial concern was pesticide use and possible toxicity of the water," says Jack Bend, Professor of Pathology, Paediatrics and Physiology and Pharmacology, and Awaysheh's supervisor.

"What we came to realize through Abudi's work is that the real concern is improving water quality and maintaining the lake as a sustainable water source," adds Charles Trick, Beryl Ivey Chair in Ecosystem Health, Professor of Biology and co-chair of the new program with Bend.

44 We were trying to get a feeling for possible contamination by sampling the most likely place we would find it. If there was a lot of run-off from agriculture or horticulture, the fish would be constantly exposed. 77

- Abudi Awaysheh Graduate Student in Pathology

Awaysheh's primary responsibility in Kenya was to test fish from the lake for chemical residue, mercury and the activities of enzymes. He gathered samples of black bass, common carp, tilapia and trout through traders who sold the fish caught in the lake, then performed tests on the fish in the lab.

"We were trying to get a feeling for possible contamination by sampling the most likely place we would find it," explains Awaysheh. "If there was a lot of run-off from agriculture or horticulture, the fish would be constantly exposed."

He also worked with two fellow Western interns to conduct surveys on health and economic status. While they found the preliminary data from the fish didn't support concerns about pesticide run-off, the health surveys indicated a more pressing need: to maintain the lake as a sustainable water source for the population, which has grown by more than 250,000 over the last decade.

44 The United Nations Intergovernmental Panel on Climate Change has identified this region of Africa as the region that is going to suffer severe drought, 77

- Charles Trick
Beryl Ivey Chair in Ecosystem Health

"We weren't prepared for what we learned," says Awaysheh. "We couldn't have contemplated how bad bad was," he says of the daily challenges and conditions faced by Kenyans in the area. Those conditions were made worse in early January 2008 by erupting political strife, ethnic violence and displacement following an election.

The Ecosystem Health Program was scheduled to host three graduate students from Kenya to pursue their graduate training at Western, but as a result of the violence and instability, they have yet to arrive. Trick hopes the political situation calms down soon so they can get on with work in Lake Naiyasha.

"The United Nations Intergovernmental Panel on Climate Change has identified this region of Africa as *the* region that is going to suffer severe drought," explains Trick. "This is a critical time to capitalize on the last stages of economic prosperity before an expected downturn in the economy and drought hits."

But both Trick and Awaysheh emphasize the true nature of partnership in this project and the importance of working with the Kenyans. It's a community-based approach that focuses on building relationships and shaping work to reflect the outcomes desired by the people most affected.

That philosophy extends as close to home as it does to Kenya. The second project area for the new Ecosystem Health Graduate Program is Walpole Island First Nation, an indigenous community in Southwestern Ontario struggling with the effects of decades of petro-chemical industry surrounding it. Two graduate students are working with a multidisciplinary team from Schulich/Western, McMaster University and the University of Guelph to analyze the health implications at Walpole Island.

"The really important problems are so immense in scope and our vision as investigators is to try to improve the situation, not just study it. So our approach has to be broad-based and multidisciplinary," says Bend. "This graduate program offers an opportunity for students to learn about diverse viewpoints — an essential part of the program."

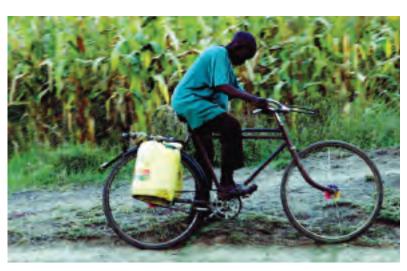
As for Awaysheh, his work helped to lay the foundation for the Kenya project but he won't be pursuing it further. He will complete his degree in Environmental Pathology this summer before moving on to the Masters of Library and Information Science program at Western.

But the hope is more students will follow in his footsteps. The Ecosystem Health Program plans to build a pool of five to 10 students from multidisciplinary backgrounds to work on the Kenya and Walpole Island collaborative projects in the coming years.

For more information on the program, contact: Charles Trick: trick@uwo.ca or Jack Bend: jack.bend@schulich.uwo.ca



Abudi Awaysheh (centre) purchases fish from traders selling fresh catches from Lake Naivasha. Photo courtesy Abudi Awaysheh



A boy transports drinking water by bicycle in Kenya. Photo courtesy Charles Trick



100 Years of Saying "YES"

by Peigi McGillivray

"If I had said 'no' once in a while, it might have been a good thing," says Dr. Glenn Sawyer about his long career as a family doctor, Secretary General of the Ontario Medical Association, author, editor and champion of Ontario physicians.

Fortunately, saying 'no' was never a big priority for Dr. Sawyer, who turned 100 this May. His contribution to medicine in Ontario has been substantial. He led the Ontario Medical Association for more than 20 years – as the longest-serving Secretary General the organization has ever had. During his tenure, medical practice in Ontario underwent seismic changes, including the introduction of universal, publicly funded health care in 1966.

"Doctors faced many issues during that time," says Dr. Sawyer, "And we're still grappling with some of them, like what services should be covered by medicare and how we're going to pay for them."



Medicine Convocation 1936: A young Dr. Glenn Sawyer embarks on a remarkable medical career.

Born on a farm in Perth County in 1908, Sawyer developed an early interest in medicine after his father apprenticed him — without his knowledge — to a local pharmacist. "I dealt with a lot of doctors in my three years there," he says, "And I thought it had

to be easier to write the

prescriptions than to read them."

44 He has an extraordinarily incisive mind and an ability to communicate his message clearly and succinctly to anyone. 77

Sawyer graduated with a BA in Honours Science from Western in 1933, and immediately plunged into the university's medical program. "It was tough then, and it's tough now," he says, "Everyone has to work hard to get through." After making the valedictorian speech at his graduation ceremony in 1936, he completed two years of postgraduate work before setting up a practice in St. Thomas, Ontario. It was while he was there that a friend urged him to help out at the Ontario Medical Association.

The Association was glad to have him. "Dr. Sawyer was always highly regarded," says Dr. Ramsay Gunton, long-time faculty leader and chief of cardiology at Western, who worked with Dr. Sawyer. "He has an extraordinarily incisive mind and an ability to communicate his message clearly and succinctly to anyone."

Sawyer's unstoppable energy and inability to say 'no' led him to accept the position of editor of the Ontario Medical Review in 1960, a job he held concurrently with that of General Secretary for 12 years. He also served on the board of the Canadian Medical Association. "There were things happening across the country that affected Ontario," says Dr. Sawyer, "And I wanted to understand them. A national perspective was important."

Dr. Sawyer also returned to his alma mater to supervise anatomy classes, and helped organize Mediscope '59, Canada's first all-medical exposition. This week-long event in Toronto, the biggest and best of its kind in North America, attracted 2.5 million visitors. "It was one of the most interesting and satisfying things I've ever done," says Sawyer. As a member of the OMA's Medical Legal Liaison Committee, he became so fascinated with the interface between medical and legal issues that when he retired in 1973, he went straight back to Western – to study law.

"There hadn't been a comprehensive book about Canadian medico-legal issues since the late 50s, so my colleague, Gilbert Sharpe and I decided to write one. My law degree gave me the background I needed, although I never practised. And believe me, studying was a lot harder as a retiree than it had been when I was younger," says Sawyer. *Doctors and the Law* was published in 1978 to glowing reviews extolling it as a 'must have' for every physician.

When he retired as General Secretary, the Ontario Medical Association established the Glenn Sawyer Service Award in his honour. It is just one of many honours Dr. Sawyer has received, including the Canadian Medical Association Medal of Service and an Honorary Doctor of Laws degree from Queen's University.

Did Dr. Sawyer learn to sit on his laurels and say 'no' after he finished his book? Not a bit of it. He continued to serve the medical profession in a variety of volunteer capacities – as charter member of the Board of Governors and Secretary of the Ontario Medical Foundation, advisor to the Ontario government, and Executive Director of the Ontario Association of Medical Laboratories. He published his second book, *The First Hundred Years: A history of the Ontario Medical Association*, in 1980.

"Dr. Sawyer has always been very engaged and active," says Dr. Douglas Bocking, long-time colleague and former Dean of Medicine at Western, "His concern was always for the welfare of the people and physicians of Ontario, and he worked very hard for them."

Now living in Victoria, BC, with his wife Helen, who is 99 years old, Dr. Sawyer returned to Ontario and Western to celebrate his 100th birthday. He remains active and interested in the welfare of physicians, but has finally learned to say 'no.'

"I look back, and I can hardly believe how busy I was. I think it must be the secret to a long life," he says, "But it's time for me to rest now, and let someone else have a turn."

Outstanding Clinical Teachers

Two professionals make lasting impressions in dentistry and medicine

by Wendy Haaf

The Doctor of Medicine and Doctor of Dental Surgery Programs rely on the strength of clinical faculty. Here are two snapshots of exceptional teachers who take on the responsibility of educating the next generation of doctors and dentists with unmatched professionalism and dedication.

Dr. Brett Ayliffe - A Passion for Teaching

It's Friday afternoon, and the adult dental clinic is bustling. In one corner, a queue forms as third- and fourth-year students wait to ask questions of Dr. Brett Ayliffe. To the student at the front of the line, however, it's as if the crowd ceases to exist as the soft-spoken instructor focuses his full attention on answering her query.

Ayliffe, a part-time faculty member in the division of restorative dentistry, doesn't think there's anything special about his ability to provide individualized instruction under these circumstances and not get flustered. "You get used to doing that with dentistry – you have a task to do, usually within a time limit," he says. He's also characteristically modest about what Dr. M. Najeeb Saad, head of prosthodontics, calls a remarkable ability to communicate with students. "I have a bit of an advantage because I get to see students in the classroom, not just in third and fourth years when they're in the clinics," Ayliffe says. (He's an instructor in a second-year course on how to cut teeth to receive bridges and crowns.)



Many of his students and colleagues cite the above qualities as just two of several that distinguish Ayliffe as an exceptional instructor and deserving recipient of the student-nominated 2007 C.Y. Lung Award. Another is his gift for putting patients at ease while helping students master unfamiliar procedures. "It's a talent when you can converse in front of the patient, while keeping the confidence of both the patient and the student." Saad observes.

44 What really impresses the students about the part-time faculty is that they do this because they have a passion for it. 77

"Dr. Ayliffe will give praise where it's due, and he'll give constructive criticism in such a way that it doesn't make you feel like you're not catching on quickly enough," explains Oriana Ly, a fourth-year dental student and 2007/08 president of the dental students' society. "His manner is always really encouraging. Students also learn a great deal about how to interact with patients by simply watching him in clinic," she adds.



It's skills like these as much as technical expertise that dentists like Ayliffe bring to the school, according to Dave MacPherson, a fourth-year dental student.

"What really impresses the students about the part-time faculty is that they do this because they have a passion for it," he adds.

Ayliffe's own love of teaching dates back to the eleventh grade when he was hired to teach an introductory computer class for adult students. Today, it's still evident in his enthusiasm, and his willingness to go beyond what's expected. For instance, notes Ly, if a student is struggling to complete a difficult impression or crown preparation, Ayliffe will often stay after hours rather than cutting the appointment short.

Couple all these things with a knack for explaining how to do hands-on tasks, and it's easy to see why his contributions are so widely and deeply appreciated by students. In short, "he's a hell of a good teacher," MacPherson concludes.

Dr. Karen Fruetel - Going the Extra Mile

While Dr. Karen Fruetel has probably forgotten the incident, it made quite an impression on first-year medical student John Snelgrove. In clinical methods class that week, Fruetel was slated to instruct Snelgrove's group on how to test a patellar reflex – something their simulated patient didn't possess. "So we tried each other, and apparently nobody in our group had

any reflexes," Snelgrove recalls. But Fruetel wasn't about to let that get in the way of the lesson. Clad in dress shoes and a skirt, the program director for internal medicine hopped onto the table and had the students take turns tapping her knees. "She was willing to do anything it took to get us to learn the process," Snelgrove says.

Whether she's demonstrating elementary clinical skills to medical students or teaching a resident how to break the news of a difficult diagnosis, that approachable attitude and genuine interest in learning characterize Fruetel's teaching style.

In fact, she goes out of her way to set up teaching sessions, according to geriatrics fellow Jo-Anne Clarke. "In preparation for exams, the other fellow and I find ourselves begging people to teach us on a weekly basis," Clarke notes. "That's never the case with Karen. She e-mails us and says, 'there's this great topic, do you have half an hour so I can talk to you about it?"

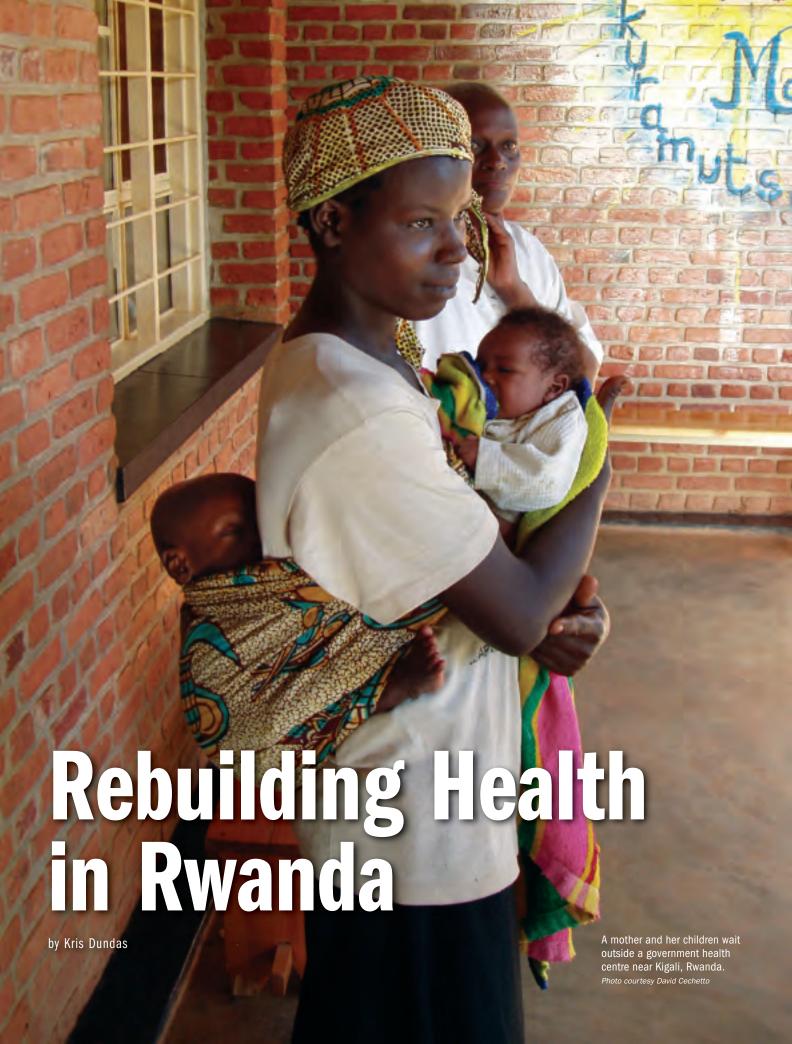
44 Teaching challenges me to be a better doctor on multiple levels — it keeps me on my toes. 77

Fruetel also suggested that after each of Clarke's clinics, the younger physician choose a clinical question for the pair to research, and they meet the following week to discuss it. For her part, Fruetel says "It's been good for me. For example, I've been avoiding learning about telomeres and aging — biology of aging bores me stiff. But because Jo-Anne and I decided to talk about it, my end of the bargain was that by next Tuesday I had to know at least as much about it as she did!"

The story hints another of Fruetel's strengths as a teacher and mentor, according to Jaimie Manlucu, a PGY4 in internal medicine. "I think the marker of a great doctor is that you're always humble enough to learn something new, whether it be from someone who's more experienced than you are, or someone junior to you," she says, adding that Fruetel personifies this ideal.

Manlucu, Clarke and Snelgrove aren't the only individuals who hold Fruetel's teaching ability in high regard. First recognized by the University of Toronto with a Young Clinician Teacher Award in 1993, her teaching has garnered multiple honours; the most recent being a 2006 Schulich Leader Award in Postgraduate Education.

But accolades aren't what drive Fruetel. "Teaching challenges me to be a better doctor on multiple levels – it keeps me on my toes," she says. "It can also be very stimulating...if you have a really good session, you leave the room feeling energized. What do I get out of it? A lot of joy and a lot of satisfaction."



As a child, David Cechetto, PhD, dreamed of becoming a medical missionary to Africa, inspired by the legendary 19th-century hero, Dr. David Livingstone.

Now, Cechetto's passion for Africa has inspired a whole new kind of mission for Western and the Schulich School of Medicine & Dentistry – to the Republic of Rwanda.

First contacted in 1999 by the rector of the National University of Rwanda, Western has made it a strategic priority to partner with the African nation still recovering from the devastating genocide of 1994.

As Director of the School's Medical Electives Overseas Program, the original request for help to rebuild the medical curriculum in Rwanda fell on Cechetto's plate. It was a fitting project for the soft-spoken professor of Anatomy & Cell Biology so inspired by African culture and history.

His first visit to the small east African country came in 2000, facilitated by the Rwandan Ambassador to Canada. Although Cechetto had taught medical school in Africa early in his career, he was unprepared for what he discovered in Rwanda.

"Although the infrastructure was slowly recovering, the health care situation was dire," says Cechetto.

nurses and high-quality nursing educators. Other partners from Fanshawe College, York University and St. Francis Xavier University soon followed.

In 2005, Rebuilding Health in Rwanda received a six-year grant from the Canadian International Development Agency (CIDA) to develop a case-based, culturally sensitive Bachelor of Science in Nursing program and intensive professional development for faculty at KHI. The first 50 graduates are scheduled to finish the four-year program at KHI in 2009 and will become leaders at the country's three main hospitals, 33 district hospitals and 300-plus government health centres.

In late 2005, Cechetto and Western once again turned attention to the Faculty of Medicine at the National University of Rwanda (NUR). A visit by Rwandan President Paul Kagame to Western set in motion a detailed review of the medical school by a team of Schulich and Western faculty members, working in partnership with NUR faculty.

In June 2006, Cechetto led the team of Peter Haase (Anatomy & Cell Biology), Cynthia Kenyon (Paediatrics), Carole Orchard (Director of Interprofessional Education, Schulich Medicine & Dentistry and the Faculty of Health Sciences), and Jim Silcox (former Vice Dean, Education for Schulich

"It was immediately clear that we had to first put our efforts into primary health care - and this was largely being delivered by nurses."

It was particularly bad for those suffering from HIV/AIDS and the long-term psychological effects of the genocide which saw 800,000 Tutsis and Hutu moderates killed, and more than three million injured or displaced. The rates of infant mortality and diseases such as cholera and malaria were also increasing and about 400,000 young people under age 20 were orphans.

To meet these health needs, the country had only 240 active doctors for a population of eight million and limited numbers of other health care professionals, particularly nurses. (By comparison, Ontario has over 22,000 physicians for a population of 12 million).

"It was immediately clear that we had to first put our efforts into primary health care - and this was largely being delivered by nurses," says Cechetto.

So he began working with the nursing school at Kigali Health Institute (KHI) in Rwanda. Carole Iwasiw of Western's School of Nursing volunteered to take on academic leadership of the capacity-building project to train more

Medicine & Dentistry) to do an initial review of the medical curriculum. Supported by the Government of Rwanda, the team returned in June 2007 to complete a more detailed review and begin the curriculum redesign.

What resulted was an ambitious plan to undertake the same kind of curriculum renewal and intensive faculty development as at Kigali Health Institute, with the ultimate goal of doubling the number of physicians in the country in just six years, and increasing representation substantially in Rwanda's 33 district hospitals.

"The curriculum takes a systems based-approach within a Rwanda context," explains Cechetto, emphasizing that the plan is in full partnership with faculty at NUR. "It's not simply transplanting Canadian curriculum to Rwanda. The course development will be based on what Rwandan doctors need to know - not only about specific disease or health threats such as HIV/AIDS, but about laboratory techniques or current technology used in Rwanda."











Opposite page photos clockwise from top left: Rwanda's Minister of Education Jeanne d'Arc Mujawamariya with David Cechetto, Director of *Rebuilding Health in Rwanda*. The National University of Rwanda. Francis Kabango (a Rwandan and former London resident instrumental in helping the project) with medical review team members Peter Haase, Cynthia Kenyon, Carole Orchard, and Jim Silcox. Western representatives tour a district hospital ward. A Rwandan doctor in Nyamata district hospital.

Below: Medical students studying in the NUR library/reading room.

Photos courtesy David Cechetto, Carol Herbert, Cynthia Kenyon.

For more photos from Rwanda, visit our online gallery at www.schulich.uwo.ca/rapport

It's an ambitious goal, but one that is achievable, says Cechetto, on one important condition: funding. Cechetto's challenge now is to find approximately \$3 million to support the second phase of *Rebuilding Health in Rwanda: Renewal of Medical Education*. He is hopeful several international development agencies will come on board.

In the meantime, Western's presence in Rwanda's health care renewal has sparked more partnerships. In late 2007, Western President Paul Davenport visited the country for a second time with Ted Hewitt, Vice-President (Research & International Relations), accompanied by Schulich Medicine & Dentistry Dean Dr. Carol Herbert and other deans and leaders from Science, Engineering, Social Sciences, and Arts and Humanities. During the visit, they discussed new projects in environmental remediation, renewable energy, health and conflict resolution, working with the Rwandan government and educational institutions.

One of those new projects will establish future exchange opportunities for dental students at the Kigali Health Institute with Schulich Dentistry.

"We've chosen to focus our international efforts so much on Rwanda because it is an area in great need and it is a place where we can truly make a difference."

Why Rwanda? "We've chosen to focus our international efforts so much on Rwanda because it is an area in great need and it is a place where we can truly make a difference," says Dean Herbert. "The faculty leading the project are some of Canada's top experts on developing and delivering medical curriculum, interprofessional education and faculty development. Their commitment to this project is particularly important."

Herbert also points out that the collaboration is of great value to Schulich students and faculty, who will benefit from exchanges and other opportunities. Three medical students and several other Western students have already travelled to Rwanda for various projects and electives. A fourth medical student will visit Rwanda in summer 2008 to complete a research project on hypertension in Butare, the city that is home to the NUR.

A new student-initiated peer matching program, Medlink, will see 50 Rwandan medical students paired with 50 Schulich students for ongoing support and discussion throughout their years in medical school.

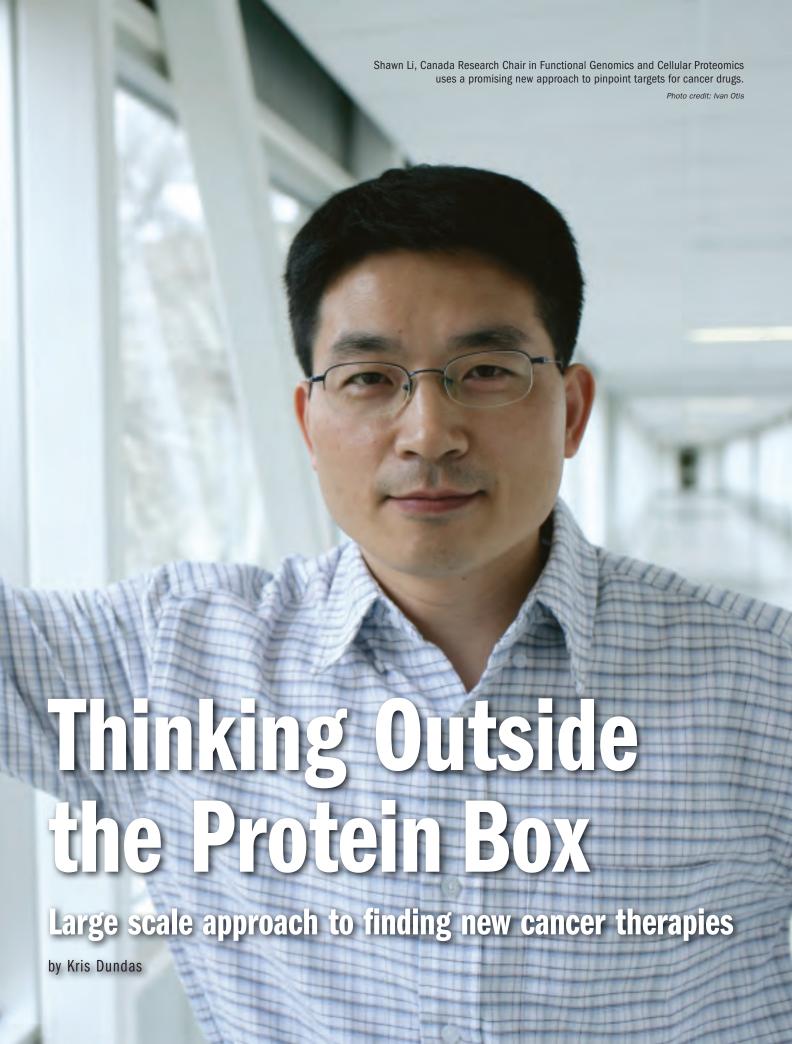
The renewal plan also calls for future relief teaching to be provided by Schulich professors to allow NUR's faculty time for professional development, and to build connections directly between Schulich Medicine & Dentistry departments and departments at NUR.

In 2006, upon President Kagame's visit to Western, President Paul Davenport said, "The foundation for a very strong relationship between Western and Rwanda is well laid. The country needs our help... This is a good place for us to invest our international resources."

As for his role as Director of *Rebuilding Health in Rwanda* and leader of Western's Rwandan activities, Cechetto says what continues to motivate him is his love for the people and the country. He also draws upon his sense of justice for those in vastly different circumstances than our own.

"We have an obligation as a global community to ensure everyone has access to excellent health care," says Cechetto. "It's not something we should say you have or don't have by accident of birth."





n order to solve big problems, sometimes you have to look at the big picture – even if it is at a molecular level.

That's just what Shawn Li, Associate Professor of Biochemistry and Paediatrics and Canada Research Chair in Functional Genomics and Cellular Proteomics, aims to accomplish by investigating proteinto-protein interaction in the cell. His goal is to understand how the interruption of protein-to-protein interaction networks could affect tumorogenesis and cancer therapy.

"It's a conceptual jump in how we see cancer as a disease — or any disease for that matter. Traditionally, the first step of understanding a disease at the molecular level is to identify the gene underlying that disease," says Li. "But really understanding or identifying the gene responsible for that disease is not going to lead to therapy because the protein is the one that does the job — the one that does the damage."

Examining the structure, function and characteristics of proteins is not new but Li's approach goes a step further. Rather than viewing a single protein in isolation, it takes into account all of the other proteins it might interact with to complete its own function – sometimes hundreds or even thousands.

"Once we understand the network and how the network alteration is leading to disease, then we can design molecules that can intervene or interrupt this network, reduce the impact of that network property or collapse the whole network."

It's not a unique approach, stresses Li, noting that 'systems biology' has been developed and adapted by institutions worldwide.

"We only have a few dozen new drugs coming to market every year, despite the number of scientists involved in disease – related research has probably doubled or tripled in the last decade," explains Li. "These new views of disease and approach to understanding disease mechanisms will probably lead to novel approaches to therapeutics."

Fueled by a multi-million dollar grant from Genome Canada and funding from the National Cancer Institute of Canada, Canadian Institutes of Health Research,



This map shows a protein interaction network. The web of blue lines denotes the relationships between proteins in the network. *Image courtesy Shawn Li*

Cancer Research Society Inc., and the Schulich School of Medicine & Dentistry, Li's lab uses peptide and protein arrays to look at proten-protein interactions in a high throughput manner. Li collaborates closely with his partners on the Genome Canada grant, Tony Pawson and Jeff Wrana of Mount Sinai Hospital in Toronto. He extends his cell-based proteomic research to clinical samples by collaborating with scientists at the Sun Yat-Sen University medical school in China to look at how protein-to-protein interactions can turn normal tissues to tumors.

A Lawson Health Research Institute Scientist, Li also collaborates with Victor Han, Lawson Scientist and Schulich Professor of Paediatrics, Biochemistry, and Obstetrics and Gynecology, to examine how changes in protein networks relate to growth retardation and birth defects.

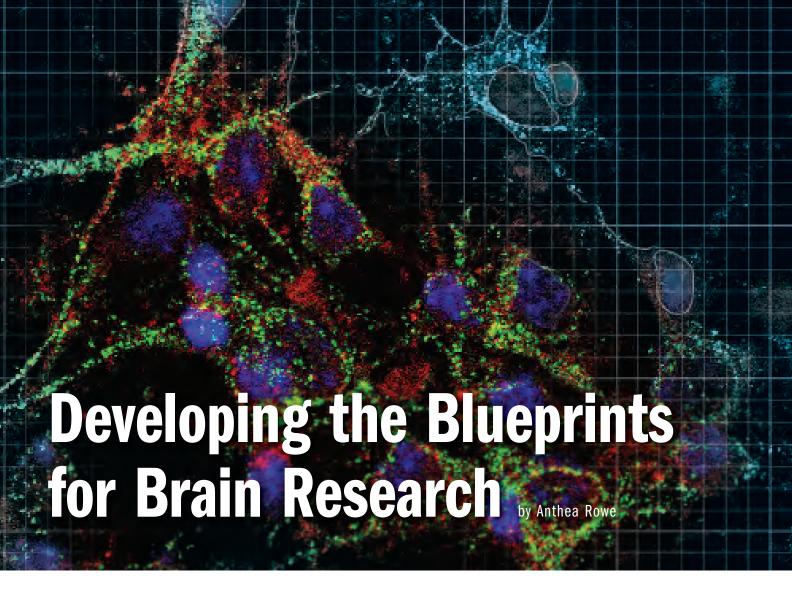
"Every day we have something new to do – that's really challenging and pushes you to learn new things constantly," says Li about what motivates his work. A Schulich faculty member since 2000, Li joined Western after completing his PhD at the University of Toronto and postdoctoral studies with Pawson at Toronto's Mount Sinai Hospital. Prior to that Li completed a Masters degree in biochemistry and undergraduate chemistry degree in China. Visibly passionate about research, Li simply states the best thing about it is getting to know the unknown.

"Ultimately, a lot of scientific discoveries are made because their results are not within their original predictions – that's where major breakthroughs in science come from."

Cancer Facts

- An estimated 166,400 new cases of cancer and 73,800 deaths from cancer will occur in Canada in 2008
- 42 per cent of new cancer cases and 60 per cent of deaths due to cancer occur among those who are at least 70 years old
- 30 per cent of new cancer cases and 18 per cent of cancer deaths will occur in young and middleaged adults ages 20-59
- Cancer incidence is rising in young women ages 20-39

Source: Canadian Cancer Society/National Cancer Institute of Canada: Canadian Cancer Statistics 2008



f home building were like drug development, foundations would always be shifting and some houses would harm rather than harbour their occupants.

That's the challenge facing the molecular neuroscience team at Robarts Research Institute. Led by Stephen Ferguson, PhD and Jane Rylett, PhD, the team is dedicated to understanding the molecular and cellular basis of a wide range of neurological diseases, including ALS, Alzheimer's, Parkinson's, Huntington's, epilepsy, depression, and stroke. And although their research is a long way from identifying specific targets for drug therapy, they're definitely developing the blueprints.

44 There are no rules in biology. We have to remain open-minded and approach cellular and molecular research from a number of angles. 77

"Many of the drugs available today are imperfect," explains Ferguson. "They may become toxic, produce side effects, lose efficacy over time, or have the frustrating effect of working marvellously for some patients and not at all for others."

That imperfection rests with the body's fundamental building blocks: proteins. Participating in every cellular process, proteins provide structure, support metabolic processes, send cellular messages, and initiate and assist immune responses; however, they are not limited to single functions or even to specific locations within the body.

Take, for example, the hormone insulin, which has been studied extensively in the context of glucose metabolism and diabetes. Researchers now know it is also produced in the brain, where it serves a completely different function than in the pancreas.

"There are no rules in biology," says Rylett. "We have to remain open-minded and approach cellular and molecular research from a number of angles."

Enter Robarts' molecular neuroscience team, which is conducting fundamental research into how cells live, die, proliferate, function, and communicate – in both healthy and diseased environments. With the identification of each

new cellular mechanism and molecular function, the team moves one step closer to developing meaningful blueprints for human biology

And in the same way that home construction requires the work of numerous skilled professionals, the molecular neuroscience team unites eight researchers with diverse clinical and scientific expertise.

"The growth of the group has been very purposeful," says Ferguson," incorporating physicians and pharmacologists, as well as cellular and molecular biologists."

For example, neurologists Drs. Stephen Pasternak and Michael Strong run an Alzheimer's and ALS clinic, respectively – and their clinical expertise and access to patients provide powerful insights into disease progression and treatment for the entire research team.

Having grown from four to eight scientists over the last four years, the molecular neuroscience team expands again in July 2008 to include the husband-and-wife scientist team of Marco and Vania Prado from Brazil. Vania Prado has the ability – unique within the University and the city – to develop models of aging and dementia in mice, enabling team members Rylett, Pasternak, and Ferguson, as well as Sean Cregan, PhD, to move their investigations of neurodegenerative diseases into animal models.

"The group's collaborative approach to disease research exemplifies Robarts' unique strength as a research institute," said Dr. Victor Han, Associate Dean, Research at Schulich Medicine & Dentistry. "The collective expertise of Robarts researchers to study a disease problem from molecules to humans should lead to more effective therapies at a faster pace."

"The molecular neuroscience group also provides a unique cellular imaging infrastructure to all Schulich scientists who are conducting not only neuroscience research but also other biomedical research in vascular biology, cancer, etc.," says Han. "So the group and its facilities really benefit a wide range of health research at Western and across London."

When Robarts Research Institute expanded in 2002 to include a 100,000 square-foot addition, the J. Allyn Taylor Centre for Cell Biology was established as an open concept lab shared by four cell biology research groups. Relatively unique among research institutions, the open concept arrangement has enhanced the group's collaborative approach to research.

"Our trainees really enjoy the open concept space," says Rylett. "Not only do they share equipment and lab supplies but, more importantly, they discuss common problems and brainstorm new approaches. It's an exciting environment in which to learn."



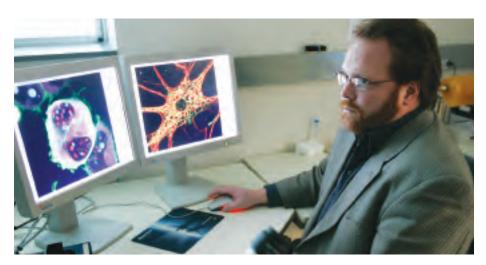
Jane Rylett, Co-Director of Robarts' Molecular Brain Research Group. Photo credit: Ivan Otis



Neurological Disease in Canada

- One of the major contributors to chronic illness in Canada
- The cost is estimated at \$8.8 billion annually
- Accounts for 3.1 per cent of drug expenditures for all illness in Canada (almost \$500 million)
- Over 9 per cent of acute care hospitalizations in 2004-05 were attributed to neurological conditions.

Source: Canadian Institute for Health Information: The Burden of Neurological Disease Disorders and Injuries in Canada 2007



Director of the Molecular Brain Research Group, Stephen Ferguson, views images from a confocal microscope, one of the group's essential tools for investigating cellular mechanisms. Photo courtesy Robarts Research Institute



Imaging the Impact of Trauma

by Kathy Wallis

There's a horrific multi-vehicle crash on Highway 401. Why is it that some of the drivers involved will be able to get behind the wheel again with no problem and even travel that same stretch of road, while others might never get past the trauma to be able to face highway driving again? It's one of the mysteries of the mind that Dr. Ruth Lanius is trying to solve. An Associate Professor in the Department of Psychiatry, Lanius has made Post Traumatic Stress Disorder (PTSD) the focus of both her practice and her research.

"Most people can say this was an awful accident, but they know it was in the past," explains Lanius. "But for someone with PTSD, they relive the trauma, actually feeling they are back at the scene of the trauma with all the anxiety and fear responses they had at the time of the actual event. This can actually be seen in brain scans." Using functional magnetic resonance imaging (fMRI), Lanius has shown that the circuitry in the brain is different in those with PTSD than those without

Lanius graduated from the University of British Columbia with a combined MD and PhD in neuroscience in 1996. She continued her training at The University of Western Ontario where she specialized in psychiatry. "I wanted to combine my interest in neuroscience with my clinical interest and learn more about what happens in the brain when people have been traumatized, and how through therapy, we could rewire some of that brain circuitry." She established the Traumatic Stress Service at University Hospital, London Health Sciences Centre, which specializes in treating and studying PTSD and related co-morbid disorders.

In December of 2006, Lanius became the first researcher named to the Harris-Woodman Chair in Psyche and Soma. "This Chair looks at the mind-body connection," says Lanius.
"It's been shown that people with
histories of early life trauma have
significantly higher risks of developing
chronic obstructive pulmonary disease,
ischemic heart disease, liver disease and
a whole host of other medical problems,
so we really want to look at the
relationship between PTSD and
physical illness."

44 It's been shown that people with histories of early life trauma have significantly higher risks of developing chronic obstructive pulmonary disease, ischemic heart disease, liver disease and a whole host of other medical problems. 77

Through her patient studies, Lanius has identified a number of risk factors for PTSD including: a past history of traumatic events, psychiatric disorders, exposure to recent lifetime stressors, or showing signs of disassociation during the event. Women suffer PTSD more often than men, and one of the biggest determinants is the person's social support. By understanding how these risk factors relate to the activation of brain regions which regulate emotions, Lanius believes physicians will be better able to predict whether someone will develop PTSD or not.

An upcoming research project will involve having trauma patients undergo neuroimaging before and after treatment to actually see how the brain changes with therapy. One of the therapies Lanius uses is called "mindfulness," a way of thinking which helps people to live in the present and not relive past traumatic experiences. But it's also a practice that she applies to her own busy life to help achieve balance. "I think knowing more about stress responses and knowing more about interventions such as being 'mindful' has changed my life, and I think the only way you can teach 'mindfulness' to patients is to practice and understand it yourself."

Post Traumatic Stress Disorder (PTSD)

- Affects 2 to 5 per cent of the population
- Affects twice as many women as men
- Can develop at any age, including childhood
- Caused by a psychologically traumatic event involving actual or threatened death or serious injury to oneself or others
- Often leads to depression or substance use problems
- Current treatments include medications for depression and psychotherapy

Source: Centre for Addiction and Mental Health



BMSc Student Sees Future in 3-D by Dawn Milne

Left: Bachelor of Medical Sciences (BMSc) student Mike Connolly poses with one of his mentors, Aaron Fenster, PhD, and a 3-D imaging system he helped evaluate. Photo credit: Shawn Simpson

After witnessing patients' gratitude while watching his father, a dermatologist, perform rural clinics in Sioux Lookout, Ontario about eight years ago, Mike Connolly was inspired to become a doctor.

His desire to accomplish something every day led him to Western for his post-secondary education because the school has a reputation for providing the best and most diverse student experience. Connolly wanted to broaden his horizons as well as his mind.

"I didn't even tour any other universities in high school. I knew I wanted to come to Western because it has such a strong reputation and now that I've been here, I know that reputation is deserved," he says.

He chose Western's Bachelor of Medical Sciences (BMSc) program, a joint program between the Faculty of Science and the Schulich School of Medicine & Dentistry. Although he now hopes to go to medical school next year and pursue a career in family medicine, he originally wasn't sure which area interested him. Connolly says he felt the BMSc program would give him broad exposure to research and other medically relevant professions. To that end, the program has delivered.

44 I knew I wanted to come to Western because it has such a strong reputation and now that I've been here, I know that reputation is deserved, 77

Connolly has been working with Aaron Fenster, PhD, Director of Imaging at the world-renowned Robarts Research Institute, evaluating a new system for 3-D prostate biopsies.

"It has been a phenomenal experience for me. I don't think there are many other universities where you'd get this kind of an opportunity," says Connolly. "Some students' undergraduate research projects are getting published, which shows the level and influence of the research that you can be involved in."

Connolly is pursuing having his own thesis work regarding the prostate biopsy system published in a clinical journal.

He has also had opportunities to interact with other academic leaders, such as the deans in his program. He says the "student-friendliness" of the deans really enhanced his student experience.

"I'm impressed with the dedication they have for their students," says Connolly.

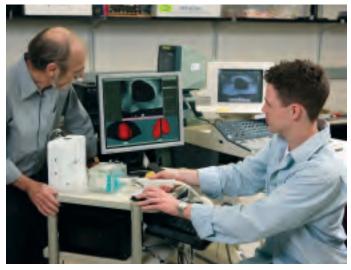


Photo credit: Shawn Simpson

He has collaborated with Kem Rogers, PhD, Associate Dean of Basic Medical Sciences Undergraduate Education at Schulich Medicine & Dentistry, on a variety of events, including a career night for Medical Sciences students. Connolly was also part of a 10-member team, spearheaded by Rogers, which represented Schulich Medicine & Dentistry in the 2008 Ride to Conquer Cancer, a fundraising bike ride in support of cancer research at Toronto's Princess Margaret Hospital.

Rogers says he interacts with students because they are the reason he's there.

"It's important to be approachable. You have to break down the barriers that say I'm in a position of authority over you," says Rogers.

An avid squash player since grade school, another highlight of Connolly's Western experience was playing varsity squash under Jack Fairs, an 84-year-old multi-sport guru who has led the Western men's squash team to 25 consecutive provincial university titles. Fairs also inspires athletes to pursue excellence in academics.

"When I first came to Western, Jack told me that it is no coincidence that in the term 'student athlete,' the word 'student' comes first," notes Connolly.

Fenster, Rogers, Fairs – Connolly has had many mentors at Western. And because of their inspiration, he has become a mentor himself. He has volunteered as a frosh leader for the Faculty of Science and provided a voice to students as the Vice-President Academic of the Science Students' Council. His contributions earned him the University Students' Council Student Award of Merit.

In addition to a career in medicine, Connolly hopes to teach some day and inspire future generations of doctors just as his father and his mentors at Western inspired him.

"I have been fortunate to have had a lot of knowledge, experience and values shared with me at Western and I look forward to continuing my education and passing what I have learned on to others," he says.



The Meds '50 Class marches to The Great Hall in uniform during Homecoming 2000. Photo credit: Rachel Lincoln

t was 1945. The world had been through six devastating years of war. For the veterans, life was beginning again.

In recognition of their service, the Canadian government's Veterans Rehabilitation Act (VRA), offered veterans an opportunity to attend university with paid tuition. At Western, Dr. George Edward Hall, Dean of Medicine and a veteran himself, reserved the entering class of 1945 entirely for veterans. When a flood of applications came in, Hall started a second class in January 1946 and merged the two. This became the legendary class of Meds '50, the Veterans class.

Dr. Howard Cameron served in the Canadian artillery for six years and saw action in northwestern Europe. He never expected to attend university but the VRA changed that. While brushing up on high school subjects before beginning engineering at Queen's, a fellow student suggested he apply to medicine at Western. Cameron says he handed in his application at 9:45 am and the admission committee met at 10. "I swear to this day that they accepted me because my application happened to be on top of the pile!"

The Meds '50 class numbered nearly 100, twice the size of the average class at the time. Their service during the war created an immediate bond, which was shared with many professors who were also veterans. At the same time, they enjoyed every aspect of university life and were active in student government, varsity athletics, and the arts.

Meds '50 maintained their special bond after graduation. At the tenth anniversary the class donated \$10,000 to establish the Meds '50 Bursary Fund. Drs. Cameron, Butson and Russell led the campaign. "We had been helped along the way," says Cameron. "We had a moral debt to repay and this was our opportunity and method of doing so."

Upon the 50th anniversary, the class donated an additional \$78,000, and thanks to a government matching program, brought the fund to more than \$215,000. The fund now exceeds \$278,800 including donations and matching funds. Held at Foundation Western, to date the Meds '50 Bursary Fund has helped 51 medical students achieve their dream of becoming a doctor through \$88,250 in financial support.



The members of Meds '50 went on to become outstanding physicians and community leaders. Among them:

Dr. Paul Yates and his wife served as missionaries in Nigeria for 30 years

Dr. Bill Keech served as a councillor and mayor of North Bay, Ontario

Dr. Frank Butson helped develop Western's Department of Family Medicine

Dr. Earl Russell served in Korea then became an expert in pain management.

Dr. Craig Arnold was registrar of the B.C. College of Physicians and Surgeons

Dr. John Aldis helped develop the Ontario Hospital Insurance Program

Dr. James Beveridge was the tenth president of Acadia University

Fundraising Highlights 2007-2008



David Holdsworth, PhD, was appointed as first chairholder of the Dr. Sandy Kirkley Chair in Musculoskeletal Research.

\$2.5 million was donated from the surgeons at the Hand and Upper Limb Centre at St. Joseph's Health Care, London to support an endowed chair.





Dr. Stewart Harris was appointed to the Canadian Diabetes Association Chair in Diabetes Management.

The new endowment to Enhance Clinical Dentistry has raised more than \$1.5 million.





The Russell family contributed an additional \$375,000 to further support the Earl Russell Chair in Pain Management.

Fundraising Priorities

The Schulich Fund

This new expendable fund will enable donors to contribute to the highest priority needs at Schulich Medicine & Dentistry. A general purpose fund, it gives the school flexibility to enhance student financial support, expand research capacity and support faculty recruitment when needed.

Student Support

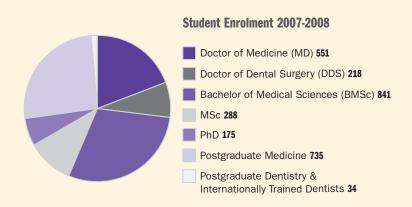
We are committed to providing more financial assistance per student than any other medical or dental school in Canada. Through more than \$6.75 million in scholarships and bursaries this year, we are opening the door for exceptional medicine, dentistry, graduate and medical science students. More funds are needed to ensure our programs remain accessible to students from all economic backgrounds.

Research and Faculty Support

Our third priority is raising funds to permanently endow faculty positions and support capital needs for expanding research facilities. By offering secure, endowed research positions, we are able to recruit the best and brightest minds to Schulich Medicine & Dentistry. By supporting space and facilities, we enable a dynamic research environment where investigators can focus on solving difficult problems and advancing knowledge of human health.

Schulich Medicine & Denti

As much as *Rapport* is about Schulich Medicine & Dentistry's students, faculty and alumni and their accomplishments, it is also an opportunity to share some highlights of the School's recent achievements "by the numbers." These pages display facts about our progress in enrolment, student financial accessibility, faculty complement, research, and fundraising.



Applicants to Professional Programs 2007-2008

	MD	DDS
For September 2007	1,802	671
Positions Available	147	55

Graduate Student Financial Assistance 2007-2008

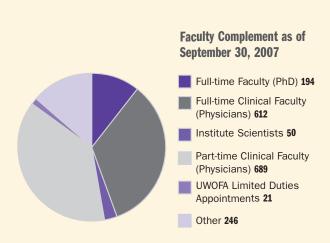
Type of Scholarship	Number Awarded	Total Value
Schulich OGS and OGSST Scholarships* (matching funds, competitive)	50	\$25,000
Schulich Graduate Scholarships (competitive)	340	\$2,210,000
Schulich Graduate Enhancement Scholarships (needs-based)	34	\$180,000
TOTAL	424	\$2,415,000

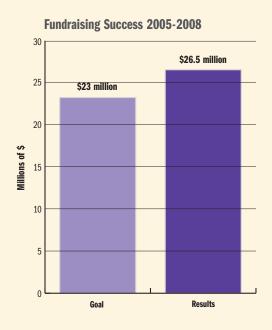
*OGS stands for Ontario Graduate Scholarship. OGSST stands for Ontario Graduate Scholarship in Science and Technology. These government scholarships require matching funds from private donors

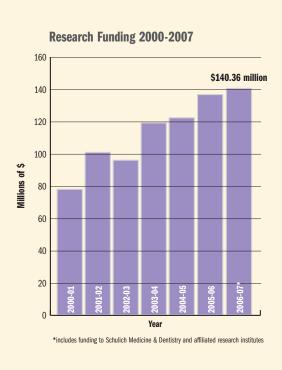
Undergraduate Student Financial Assistance 2007-2008

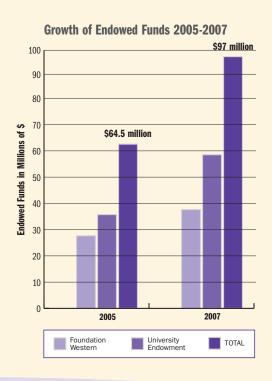
Type of Assistance	Available	Value
Needs-Based Scholarships	193	\$1,770,403
Privately Funded Bursaries	166	\$354,234
University Supported Bursaries	Variable (according to need)	\$2,248,644
Work Study	Variable	Approx. \$40,000
TOTAL	405+	\$4,373,281

stry By the Numbers











Schulich School of Medicine & Dentistry

SHAPING THE FUTURE OF HEALTH CARE





Office of the Dean Schulich School of Medicine & Dentistry The University of Western Ontario London, ON N6A 5C1