

Rapport

 **Schulich**
MEDICINE & DENTISTRY



Issue Five Winter 2010/11

Solving the Mysteries of the Brain

OUR NEUROSCIENTISTS ARE
LEADING THE EXPLORATION



PLUS inside this issue... THE ROBARTS RESEARCH DISCOVERY FEATURE

The University of Western Ontario



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SAVE THE DATE

130th Anniversary Gala
September 30, 2011
www.schulich.uwo.ca/homecoming



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ABOUT THE SCHOOL

The Schulich School of Medicine & Dentistry is focused on research and education programs to shape the future of health care in Canada and around the world. With its flagship programs in dentistry and medicine and its world-class research investigators and teams, including those at Robarts Research Institute, the School brings innovation every day to patient care, medical knowledge, health education and health policy.

ABOUT RAPPORT

Rapport magazine is published by the Schulich School of Medicine & Dentistry at The University of Western Ontario.

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AMIT CHAKMA (LEFT) BECAME WESTERN'S 10TH PRESIDENT & VICE-CHANCELLOR IN JULY 2009. DR. MICHAEL STRONG BEGAN HIS ROLE AS DEAN IN JULY 2010.

Taking the Lead

Stepping into a new leadership role is a great challenge. We should know. But it is also an exhilarating, life-changing moment – an opportunity to raise our expectations and light the fires of creativity and passion within those around us.

Western's Schulich School of Medicine & Dentistry is on the verge of experiencing that leadership moment. Under Dean Carol Herbert's tenure, the School transformed itself from an excellent training centre with areas of research excellence to a world-class academic health care centre poised to take the lead on the national and international stage.

With its strong foundation in exceptional, patient-centred clinical training and outstanding medical sciences education, the School now has a tremendous opportunity to grow its research potential on a global scale. Our recent recruitment of Adrian Owen – an internationally renowned neuroscientist from the University of Cambridge – grabbed the attention of the scientific community around the world and sent a clear signal that Western is ready to make that leap.

The world's best research-intensive universities often feature a strong medical school at their core. At Western, we have one with nearly 130 years of history, yet focused on the next century of health care needs. With Canada's population aging, the time is ripe for Schulich Medicine & Dentistry to take the lead in both researching long-term lifecycle implications for health and providing unique training for students on the cumulative impact of lifestyle factors for their patients. We will do this by expanding our multidisciplinary research programs to focus on the most critical health issues, and by enhancing our focus on population health and personalized medicine.

This goal is achievable based on our central geographic location in Southwestern Ontario – a unique 'living lab' ideal for clinical and population health research – and the strengths of our University and partner institutions. But it will also require a significant investment of time, talent, resources and infrastructure.

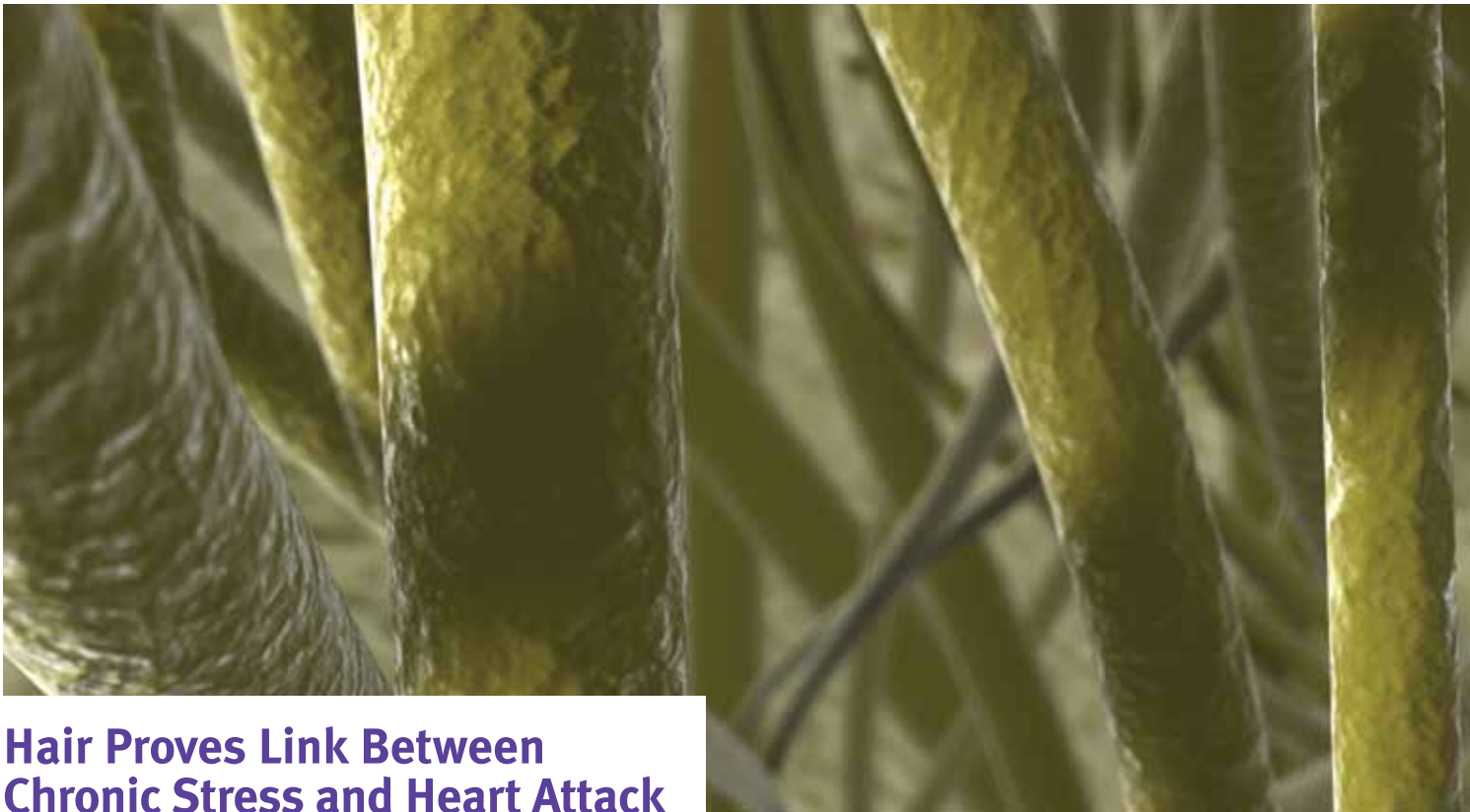
We have begun the process of restructuring to sharpen our competitive edge and, as a major component of Western's current fundraising campaign, the School will be looking to significantly expand its teaching and research facilities. You can read more about our ambitious plan on page 32.

The profiles in this magazine of our accomplished alumni, outstanding teachers, inspiring students and exceptional research programs are proof of our potential to lead. With your support, we are confident in our ability to seize the leadership moment in front of us.

AMIT CHAKMA
PRESIDENT & VICE-CHANCELLOR
THE UNIVERSITY OF WESTERN ONTARIO

DR. MICHAEL J. STRONG
DEAN, SCHULICH SCHOOL
OF MEDICINE & DENTISTRY

SCHULICH MEDICINE & DENTISTRY [CHECK-UP



Hair Proves Link Between Chronic Stress and Heart Attack

Stress has been commonly linked to increased risk of cardiovascular disease including heart attack, but up until now there has been no conclusive biological marker to measure the impact of chronic stress on cardiovascular health. Schulich scientists Dr. Gideon Koren and Stan Van Uum, PhD, developed a method to measure cortisol levels in hair enabling clinicians to predict acute events such as a heart attack.

Secretion of the hormone cortisol is increased during times of stress and is captured in the hair shaft. “We know that on average, hair grows one centimetre a month, and so if we take

a hair sample six centimetres long, we can determine stress levels for six months by measuring the cortisol level in the hair,” explains Koren, who holds the Ivey Chair in Molecular Toxicology at Schulich Medicine & Dentistry.

The pair’s study published in the journal, *Stress*, collected hair samples from 56 male adults suffering heart attacks. A control group of 56 male patients hospitalized for reasons other than a heart attack, was also asked for hair samples. Higher cortisol levels corresponding to the previous three months were found in the heart attack patients.



Silcox Receives Honorary Degree

A university degree represents more than a piece of paper, but the degree inscribed on it should not limit the scope of your dreams. This was the advice of former Vice-Dean and Professor Emeritus Dr. Jim Silcox. Silcox was conferred an honorary Doctor of Laws from Western in June in recognition of his contributions as a physician; his nearly three decades of clinical practice in the Department of Obstetrics and Gynaecology; and his involvement in the creation of the Southwestern Ontario Medical Education Network (SWOMEN).

“Among academic physicians, it is not rare to find a clinical expert, mentor, teacher, administrator, innovator, and leader of lifelong learning,” said Dean Carol Herbert in presenting the citation for Dr. Silcox. “But it is extremely rare to find a single individual who embodies all of these roles of the physician so completely as James Silcox. At the core he is a humble, humane, compassionate man – a servant-leader throughout his career.”

Honouring Dean Herbert

With the Great Hall full of family, friends and colleagues, former Schulich School of Medicine & Dentistry Dean Carol Herbert was praised in June 2010 for her contributions not only to the field of medicine, but to The University of Western Ontario during her 11 years as Dean.

“While we celebrate Carol’s years as Dean, it is just one chapter of her leadership at Western, as she will return in a different role as a scholar and leader,” said Western President Amit Chakma.

Herbert plans to continue teaching and research as a member of the Departments of Family Medicine and Pathology and the new Centre for Human Immunology.



DEAN CAROL HERBERT (MIDDLE) WITH HUSBAND, FRED SCHWARTZ (L) AND DR. DAVY CHENG (R)



DR. AMIT CHAKMA AT THE BIRC LAUNCH

Western Launches Biomedical Imaging Research Centre

Western’s new Biomedical Imaging Research Centre (BIRC) was launched in September 2010 with a clear vision: to be the best integrated biomedical imaging research program in Canada and to rank among the top five in the world. It is focused on the discovery and development of innovative imaging techniques and instrumentation to improve the understanding, diagnosis, and treatment of human diseases, and unites a number of groups from the Schulich School of Medicine & Dentistry, Western Engineering, Robarts Research Institute and Lawson Health Research Institute.

“Biomedical imaging is already recognized as one of the great research strengths in London,” says Dr. Aaron Fenster, BIRC Director and Robarts scientist. “By integrating all of our scientists and resources under the umbrella of BIRC, we will expand our research, generating advances in medical imaging that will change clinical practice.”

With a core of 39 scientists, 50 associated researchers and 150 graduate students, BIRC has received external funding worth over \$120 million over the past six years. The group has 39 patents filed, 15 licensing agreements and seven spin-off companies.

Founding Father of Modern Biophysics Recognized

The late Alan C. Burton, founder of the Schulich Department of Medical Biophysics – the first department of its kind in Canada – was inducted into the Canadian Medical Hall of Fame in 2010. Considered a founding father of modern biophysics, Burton is appreciated most for his ability to crystallize physical concepts in medicine and make learning relevant, exciting and, most of all, fun.



Burton served as President of the American Physiological Society (1956), Biophysical Society (1966) and the Canadian Physiological Society (1959).

He was honoured with the Gairdner Foundation International Award for Cardiovascular Research (1961) and received two honorary degrees. In 2009, Schulich named its Canada Foundation for Innovation-funded biophysics laboratory the Alan C. Burton Laboratory for Vascular Research in his honour.

Double Lifetime Honours for Calvin Stiller



In April, Schulich Professor Emeritus Dr. Calvin Stiller received the 2010 Canada Gairdner Wightman Award in recognition of his contributions to transplantation and diabetes, and as an entrepreneur and builder of institutions that enrich Canadian research, including his role as one of the founders of Robarts Research Institute. The Gairdner Awards are Canada's only international science prizes and are considered one of the world's most prestigious medical research awards. The Wightman Award recognizes

a Canadian who has demonstrated outstanding leadership in medicine and medical science. A week later, Stiller was inducted into the Canadian Medical Hall of Fame, again in recognition of his contributions to the field of transplantation and as a builder of research institutions across the country.

More Hands-on Training for Medical Students

In December 2010, Schulich Medicine & Dentistry received \$3.37 million from the Ontario Ministry of Training, Colleges and Universities – part of a \$20 million investment in five Ontario medical schools. The funding will be used to provide more hands-on training for medical students at simulation centres and in community health centres, as well as to improve teaching skills and recruit more community-based instructors.

"We have to ensure our students have access to the most up-to-date and innovative training," said Minister John Milloy in making the announcement. "We are already expanding first-year medical spaces to create more opportunities for medical students to train and prepare for careers as doctors. Today's investment is part of our Open Ontario plan to help ensure that, no matter which southern Ontario medical school a student attends, they will receive an innovative and interactive education."



ONTARIO MINISTER OF TRAINING, COLLEGES AND UNIVERSITIES, JOHN MILLOY

Schulich to Benefit from Healthy Smiles Ontario



MINISTER OF HEALTH AND LONG-TERM CARE, DEB MATTHEWS, ANNOUNCES THE HEALTHY SMILES PROGRAM WITH FELLOW LONDON MPP KHALIL RAMAL (L) AND CHRIS BENTLEY, ATTORNEY GENERAL AND MINISTER OF ABORIGINAL AFFAIRS (R)



BASMA ABU ZOUR AND SON, FARES FARAG ALLA, TALK ABOUT HOW THE HEALTHY SMILES PROGRAM WILL HELP THEIR FAMILY

A new no-cost dental program for Ontario will help ensure that eligible children can maintain good oral health. It will also allow seven local health units, including the Middlesex-London Health Unit, to divert some of those funds to pay for a \$500,000 general anesthetic operating suite for paediatrics at the Schulich School of Medicine & Dentistry.

Announced in fall 2010, the Healthy Smiles Ontario program will ensure that kids can have regular visits with a dentist or dental hygienist. The program is expected to benefit 130,000 children throughout the province from low-income families without any form of dental coverage.

"This initiative to build an anesthetic operating suite at Schulich will help children by reducing the wait times for treatment. It will also reduce the pressure on hospital wait times for these procedures, and provide valuable training," says Dentistry Director Dr. Harinder Sandhu.

Medicine and Engineering: A Path to Change

“The program taught me the importance of innovation, effective problem-solving, sharing knowledge and giving back to my community.”



When Samir Raza (BESc/MD'10) began his studies at The University of Western Ontario as a National Scholar in 2003, he planned on using his engineering skills in the field of medical research. But his academic interests changed, and he soon discovered a desire to pursue a career in medicine.

A transfer to the Integrated Engineering and Medicine degree program (BESc/MD) in the Schulich School of Medicine & Dentistry made perfect sense.

“In the combined program, you get a great deal of personal attention and support,” says Raza, who is now a first-year resident in internal medicine at Schulich. “That made the seven-year whirlwind journey easier, more enjoyable and less stressful.”

As he progressed through the program, Raza's aspirations shifted from using his engineering skills to solve technical medical problems, to using his knowledge of engineering and medicine to solve global health and development challenges.

The catalyst for that shift was his involvement in Western's chapter of Engineers Without Borders (EWB). The organization's mission to promote human development in impoverished communities energized Raza, and he became president of the group during his first year of medical school.

“As EWB president, I really developed as a leader and as a public speaker,” says Raza, who helped raise more than \$40,000 for overseas projects. “And I discovered my passion, which is international development.”

Today, he remains highly involved with EWB, both at Western and at the national level – currently as a coordinator of the organization's ‘Member Learning Program,’ which strives to expand its members' knowledge of international development and leadership skills.

During his residency, Raza has also developed a keen interest in health systems and policy, as well as teaching. He hopes those interests, combined with his passion for international development and global health, will form the foundation of his career.

“I'm using this year as an exploratory phase to learn how I can best contribute in these areas,” says Raza. “In doing so, I hope it will equip me to have a more meaningful and significant impact in the future.”

In the meantime, he's simply busy with the day-to-day life of a resident. “I'm having a great time, and I'm really enjoying the program,” he says. “I'm constantly learning, and I get to work with fantastic colleagues.”

Raza says there's no question his studies at Western have helped shape him – both personally and professionally. “Western had a profound impact on my career choice and the individual I have become.” The program, he adds, “taught me the importance of innovation, effective problem-solving, sharing knowledge and giving back to my community.”

Leaving a Gift of Learning

BY TODD DEVLIN (MA'09)

Donating one's body to science has been referred to as a final contribution to society.

"There is a great amount of altruism," says Haley Linklater, lab supervisor in the Department of Anatomy and Cell Biology, who is responsible for handling the donations to the Body Bequeathal Program at the Schulich School of Medicine & Dentistry.

Many people choose body bequeathal as a way of giving back to humanity and to increase the quality of health for future generations.

"By donating their bodies and training future health care professionals, they are educating a new group of students – a generation that may find cures to diseases," Linklater says.

Whatever the reason, body bequeathal is an act that benefits a large number of students at The University of Western Ontario, including those in medicine, dentistry, physical therapy, occupational therapy and kinesiology, who are provided the opportunity to learn anatomy through the best

possible teaching tool – the human cadaver. As a result, students gain a unique understanding of the human body and its form and function.

As a way to express their gratitude, students are invited to speak at an annual memorial service held for donor families and friends. At one service, Jacqui Piggott, a member of Schulich Medicine Class of 2011, delivered this message:

"My donor has taught me about anatomy more eloquently than any lecture or text ever could. I have confidence now in my knowledge of the human body, and this I owe to my donor. As I move forward in my career in medicine I will never forget his sacrifice."

Dr. Peter Haase, Director of Clinical Anatomy at Schulich, is also vocal in his appreciation of donors, and he makes sure to express this to families at the service.

"Donors do so much for us, so whatever their roles and occupations in life, you can now add to that list teacher and mentor," Haase explains.

Many families also find the memorial service to be helpful in the grieving process. That was certainly the case for Stewart Nutt, whose mother, Margaret, was honoured at a service last spring.

"It allowed our family to share this experience with many others," says Nutt, whose mother and father both decided several years ago to donate their bodies to science.



FOR MORE INFORMATION ON THE BODY BEQUEATHAL PROGRAM, VISIT
www.uwo.ca/anatomy/res_serv/bequeathal.html

“My donor has taught me about anatomy more eloquently than any lecture or text ever could. As I move forward in my career in medicine I will never forget his sacrifice.”

JACQUI PIGGOTT, CLASS OF 2011

“They felt a responsibility to help others in any way possible when they lived, and they felt the Body Bequeathal Program at Schulich and Western would in some small way allow their body to be used to benefit others after their death,” he explains.

Nutt has since decided to follow in his parents’ footsteps.

“Students at the service talked about learning so much from their ‘teachers’ – the bodies used in their program,” he says. “I have been a teacher for many years, and I felt this one last lesson could benefit a student or students in some lasting way. What better legacy could I leave?”





Changing Course

New dental curriculum brings earlier clinical experience

BY TODD DEVLIN (MA'09)

SECOND-YEAR DENTISTRY STUDENT JILLIAN FARACI (R) WORKS WITH FOURTH-YEAR STUDENT AMY ECKENSWELER TO TREAT A PATIENT IN THE ENDODONTIC CLINIC

It's been a year and a half since Schulich Dentistry rolled out revised curriculum for the Doctor of Dental Surgery program. And while there is still work to be done to complete the entire plan, the early returns suggest the transition has been smooth.

"The feedback has been very positive for the most part," says Dr. Richard Bohay, Associate Professor and Assistant Director of Academic Affairs for Dentistry, who led the curriculum revision. "And the recommendations for change have been constructive."

One of the main goals was to provide students with more clinical experience. In the past, students received the bulk of that experience in Years 3 and 4. Now, they're slowly and progressively exposed to the clinical environment right from Year 1 – working in teams alongside senior students.

As a result, second-year students are now ready to begin direct patient care in areas of diagnosis, prosthodontics, periodontics and restorative dentistry. That's precisely what the Class of 2013 – the first under the new curriculum – is doing this academic year.

Jillian Faraci, one of the 56 students in that cohort, feels she has benefited from the revised dental curriculum.

"I particularly enjoy assisting in the clinic and working directly with removable prosthodontic patients," she says. "Because we completed many of our didactic courses in first year, now we have more time for hands-on clinical experience."

Another benefit, Faraci says, is the streamlined learning process.

"Because we completed many of our didactic courses in first year, now we have more time for hands-on clinical experience."

JILLIAN FARACI


"We learn in modules to better integrate and relate information from various courses," she says. "It has been a great experience, and I look forward to the next two years."

Heading into those final two years, Faraci and her classmates may be more prepared than any Schulich Dentistry class before them.

"By third year, students will have the skills necessary to begin comprehensive diagnosis and treatment planning, as well as delivering essentially all of the basic treatments provided by dentists," says Bohay.

The curriculum revision process started back in 2005 when an intensive review was conducted by Schulich Dentistry administration, faculty and students. That came on the heels of published reports by the American Dental Education Association (ADEA) and the Association of Canadian Faculties of Dentistry (ACFD), which recommended a shift towards competency-based dental education.

A strategic plan was then developed, mapping out the future of the curriculum. The revised program began in September 2009, and the final components of the third and fourth years of the program will be in place by February 2011.

"While our work is not done," Bohay says, "I am grateful to our faculty, staff and our students, past and present, who have been so supportive and helpful in this large, complex endeavour." 

Stopping Chameleon Cancer Cells

BY KATHY WALLIS

Being named “Canada’s Premier Young Researcher” for 2010 by the Canadian Institutes of Health Research (CIHR) is a great honour, but Lynne-Marie Postovit, PhD, admits feeling some pressure. “It makes you want to live up to expectations,” says the Assistant Professor in the Department of Anatomy and Cell Biology.

There’s no doubt she’s up for the challenge. During her doctoral training at Queen’s University she discovered metastasis (the spread of cancer to other parts of the body) could be blocked by supplying nitric oxide to cancer cells. That led to a start-up company, and a treatment for prostate cancer now in clinical trials.


Her research during her postdoctoral training at Northwestern University in Illinois found that exposing tumour cells to human embryonic stem cell microenvironments blocks the formation of melanoma and breast cancer tumours. Those findings have been patented and licensed to a U.S. pharmaceutical company.

Postovit is a cell biologist, and while she didn’t set out to do cancer research, that’s where her attention is now focused. She hopes to develop new therapies by understanding and taking advantage of the common characteristics between human embryonic stem cells and cancer cells. “Both can live forever whereas a normal cell can only divide so many times before dying off. Cancer cells acquire immortality allowing them to form big masses and to spread,” explains Postovit. “And just as stem cells can differentiate, cancer cells will change their behaviour to look like other cell types. The analogy I often use is that cancer cells are like chameleons; they adapt to their surroundings so they can evade therapy and become difficult to treat.”

Born in Tecumseh and raised in Whitby, Ontario, Postovit wanted to return to Canada after her training, and she knew she wanted to teach in a research-intensive medical school. She chose Western and Schulich Medicine & Dentistry because she liked the infrastructure and saw a lot of potential for research collaborations.

“I think research and education are tied together. The better the research we do, the better the training we can give our graduate

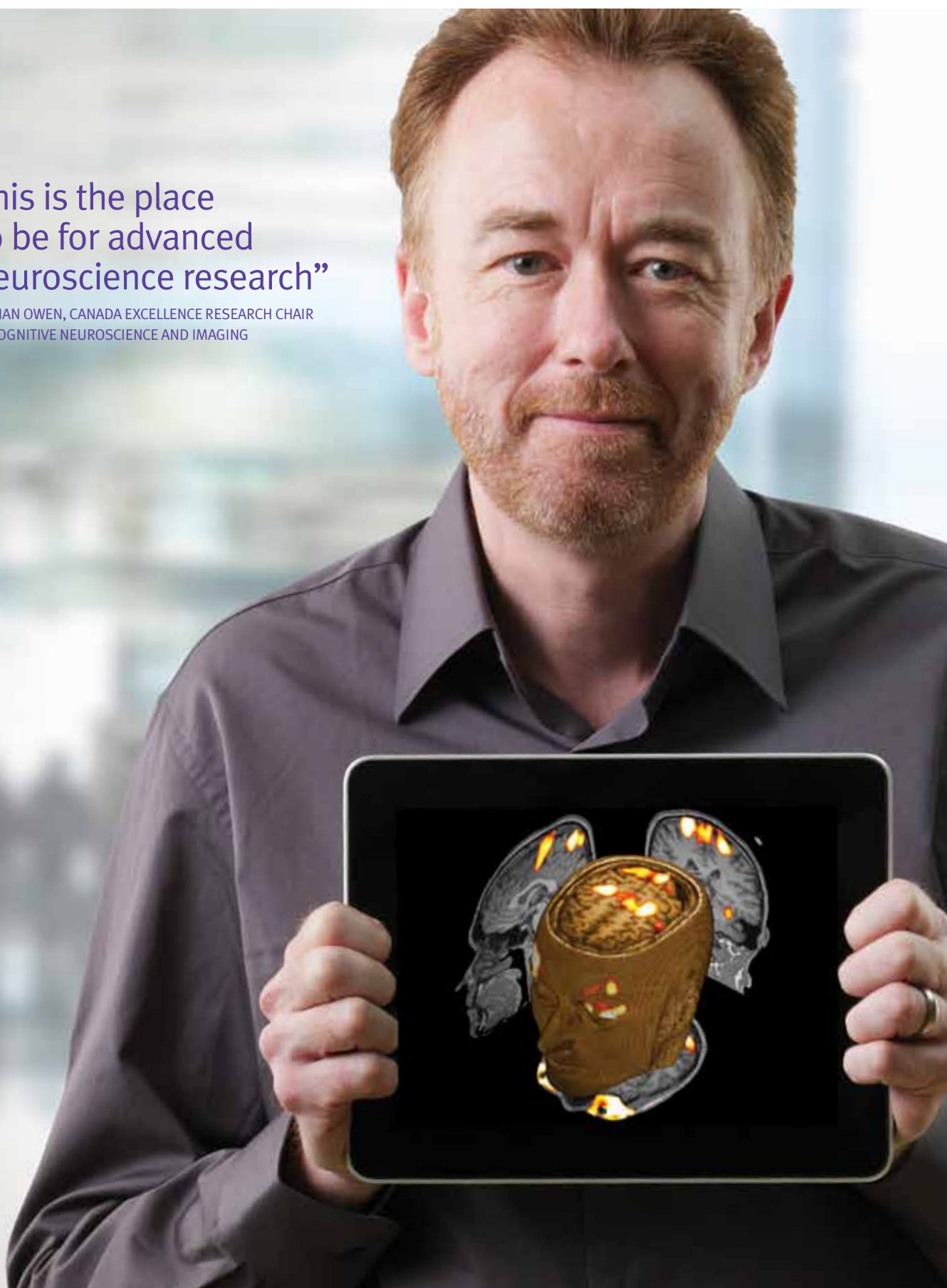
students. But even at the undergraduate level, we can bring the discoveries we’re making in the lab into the classroom curriculum.”

During the CIHR award ceremony Postovit was called “one of the brightest minds in health research today” and “a wonderful role model.” Only 33 years old, she is already well on her way to having a distinguished career in both research and education. 



“This is the place
to be for advanced
neuroscience research”

ADRIAN OWEN, CANADA EXCELLENCE RESEARCH CHAIR
IN COGNITIVE NEUROSCIENCE AND IMAGING



The Brain... The Final Frontier

BY LAURIE MERYL BURSCH (BA'87)

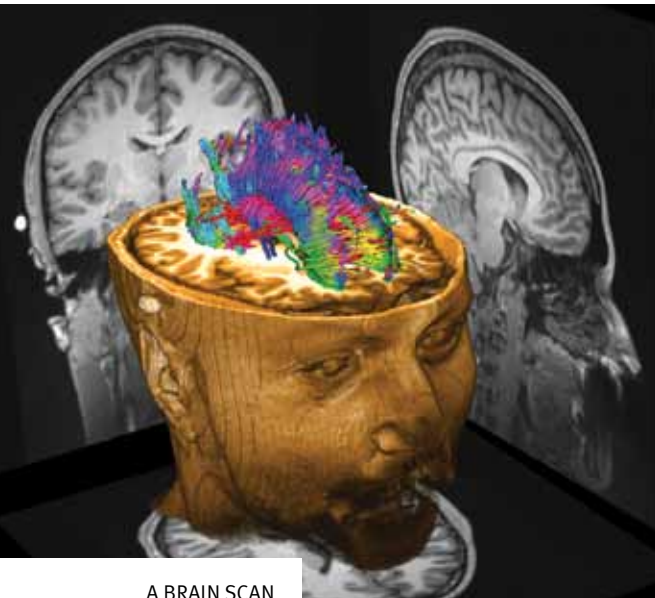
"I think Captain Kirk in Star Trek was wrong," says Mel Goodale, Director of Western's Centre for Brain and Mind. "Space is not the final frontier; the brain is."

Neuroscientists at the Schulich School of Medicine & Dentistry and The University of Western Ontario are at the forefront in exploring that frontier.

Led by the Faculty of Social Science and the Schulich School of Medicine & Dentistry, including imaging scientists at Robarts Research Institute, the Centre for Brain and Mind brings together leading researchers and Canada's most advanced imaging technologies. It is recognized as a national and international leader in cognitive neuroscience research.

"The aging population means that we're faced with almost an epidemic of cognitive problems," says Goodale, Canada Research Chair in Visual Neuroscience and a Professor in the Departments of Psychology and Physiology & Pharmacology. "As people grow older, their brains don't work as well; they have problems with memory, with thinking through problems, and so on."

The increased incidence of cognitive deficits has emerged as a significant, and growing, social and economic problem. An estimated 450,000 Canadians over age 65 have Alzheimer's disease or related dementia. Debilitating diseases such as Alzheimer's, amyotrophic lateral sclerosis (ALS), dementia and Parkinson's affect millions of Canadians and, according to the World Health Organization, diseases of the brain are predicted to surpass cancer as the second-leading cause of death in Canada by 2040.



A BRAIN SCAN
DONE USING THE
3-TESLA MAGNET AT
SCHULICH'S ROBARTS
RESEARCH INSTITUTE

Western neuroscientists are leading research to understand the mechanisms underlying brain diseases, and develop new and better ways to diagnose, treat, and ultimately prevent these devastating neurological disorders.

"If we want to develop better drugs to help deal with these cognitive problems, other kinds of therapies and other ways of diagnosing problems, then we really have to understand how these basic processes work in the brain," says Goodale.

Neuroscience is a key area where traditional barriers between disciplines have

disappeared; experts from molecular and cell biology, right through to physicians treating patients, are coming together to solve the mysteries of the brain.

Michael Lehman is the former Chair of the Department of Anatomy and Cell Biology and also served as co-director of the Neuroscience Interdisciplinary Initiative at Western. "Neuroscience, as a field, really came from the recognition that to solve and tackle the big issues one has to take a multi- and inter-disciplinary approach to understanding brain function and dysfunction at many different levels of analysis, using different expertise and different perspectives," Lehman says.

Ravi Menon, Robarts Associate Director and Canada Research Chair in Functional and Molecular Imaging, also recognizes the importance of those cross-disciplinary relationships. Menon is developing technology for functional magnetic resonance imaging (fMRI) and learning what it can reveal about brain function.

"Our lab works with people in four or five faculties: Science, Social Science, Schulich Medicine & Dentistry, Engineering and Health Sciences," says Menon. "They're developing new kinds of hardware and new kinds of chemistry to make different proteins or molecules visible that are currently not, or doing things like brain-function mapping, where we work with people in psychology and psychiatry."

Menon describes Robarts' MRI equipment as among the best in the world. The 9.4-tesla magnet is used for pre-clinical imaging. The low-field, 3-tesla magnet is used for clinical work in neuroscience and psychiatry, as well as cardiology. The 7-tesla magnet is unique in Canada and is used for developments related to new MRI techniques, ultra-high-field MRI hardware developments and their applications with patients. This includes work on Alzheimer's disease and multiple sclerosis.

Robarts' powerful magnets helped recruit Adrian Owen, one of the world's foremost neuroscientists from Cambridge University. He is now Western's Canada Excellence Research Chair (CERC) in Cognitive Neuroscience and Imaging.

"This is the place to be for advanced neuroscience research," Owen says. "The opportunity to work closely with world-class colleagues, the best equipment available and to have patients nearby that my work can help drew me to London and will make it easier for me to achieve my research objectives – and to push the envelope even further."

Owen will study the cognitive deficits in patients suffering from neurodegenerative diseases, and the causes of these diseases, with the goal of improving early detection and treatment. His work will also improve health care delivery for brain-injured patients. His areas of study reinforce international strengths in cognitive neuroscience and imaging at Western and Robarts, providing a solid foundation for future research with fMRI.

Dean Michael Strong, a neurologist himself, is excited about the tools now available for neuroscience research.

"There's something about being at the cutting edge of biology as it is developing, Strong says, "When I look at the tools that we use now in the lab, they weren't even imagined 20 years ago. How many fields do you have like that, where things are developing so quickly and your tools are getting so much better?"

Imaging and neuroscience have been identified as strategic research strengths at Western and Robarts. The work is leading to some important discoveries.

Strong's work, for example, has identified the abnormal proteins in ALS. His lab has taken the proteins and recreated the modifications seen in the human brain within a cell culture model. "So now we can ask, 'Could we pharmacologically treat that?'" says Strong.



Western neuroscientists are leading research to understand the mechanisms underlying brain diseases, and develop new and better ways to diagnose, treat, and ultimately prevent these devastating neurological disorders.

CENTRE FOR
BRAIN AND
MIND SCIENTISTS
RAVI MENON (L) AND
MEL GOODALE (R)

One of Goodale's main projects aims to understand the functional organization of different visual areas in the human brain – and how they work together in adaptive behaviour. That work is helping to better understand perceptual and visuomotor deficits in neurological patients – leading to more efficient clinical diagnosis and rehabilitation.

In 2008, research led by Rob Bartha, a scientist at Robarts and the Centre for Brain and Mind, discovered a promising biological marker for Alzheimer's disease. Using the imaging technology at Robarts, Bartha found clear evidence that increases in the size of the brain ventricles are directly associated with cognitive impairment and Alzheimer's disease.

In a recent study with congenitally deaf cats, Stephen Lomber, another scientist at the Centre for Brain and Mind, discovered a link between enhanced vision and reorganization of the part of the brain that usually handles hearing, providing insight into the brains of deaf people.

Menon, meanwhile, is using novel MRI techniques in multiple sclerosis patients to understand how the disease occurs, as well as making the earliest possible diagnosis. He also reports that with Robarts' 9.4-tesla magnet, work is being done in the areas of cancer, and prion diseases like Creutzfeldt-Jakob (mad cow disease).

There is genuine scientific passion in the voices of the neuroscientists as they talk about their work. "It's a huge field, trying to understand how the brain works, how it enables us to think, and move, and see the world," says Goodale.

"Neuroscience is still the final frontier in all respects," says Lehman. "All of us got involved because it's the most exciting of areas. I think we still know relatively little ...and it will be very exciting over the next couple of decades to see what happens. 🌀"



Transforming Kidney Care

Dr. Amit Garg, Director of the London Kidney Clinical Research Unit (KCRU), says in the areas of dialysis, transplantation and renal work, London has an international reputation for outstanding research and care. Now the team is building on that foundation with new ideas and ways to improve the health of patients with kidney disease.

Garg has been Director of the Lawson Health Research Institute-based KCRU since 2004. The unit combines excellent knowledge of patient care with expertise in population health, health services research, health informatics and clinical research, all with a focus to translate its discoveries to provide better care for patients in London and worldwide.

“My appointment as Director was to take the research to the next level. With tremendous support and effort from numerous people I think that’s happened – we do things more efficiently, with more expertise, ask better questions and obtain better answers.”

Garg is an Associate Professor in the Division of Nephrology, Department of Medicine and he is cross-appointed to the Department of Epidemiology & Biostatistics.

In 2010 he was recognized with a University of Western Ontario Faculty Scholar award acknowledging the international impact of his work. He also holds a Clinician Scientist Award from the Canadian Institutes of Health Research and a Research Award of Excellence from the Premier of Ontario.

“Nephrology has traditionally been dominated by basic science research which is very important. My interests were more in clinical-based research which is equally important.” Garg says by applying a different research model, the team in London is making major contributions in their subspecialty, including world-renowned research in new methods of dialysis, E.coli infections and living kidney donation.

The team is also improving how pertinent medical information is searched and retrieved by health care professionals. A study led by Garg and published in the *British Medical Journal* in October 2009 showed that applying filters to MEDLINE searches could vastly improve physicians’ access to important information to guide care.

“Instead of searching the entire MEDLINE database, doctors can now perform their search within a set of articles.” The filters can be applied to all disciplines, potentially impacting all specialties – worldwide.

For all of KCRU’s successes, Garg says the challenges in his field are monumental. “Some kidney disease patients have a worse life expectancy than many types of cancer. So one of our challenges over the next decade is to dramatically improve the outcomes of those patients and help prevent kidney disease in the first place.”

DISCOVERY



James White, M.D.
Cardiovascular M.D.

robarts
RESEARCH

ENTERING A NEW
DIMENSION IN **HEART**
TREATMENTS



CONVINCING CANCER CELLS TO SELF- DESTRUCT

December 2009 - When cells experience DNA damage, they'll try to repair it. But if that fails, the damaged cells are supposed to self-destruct in a process called apoptosis. **Caroline Schild-Poulter, PhD**, has identified a protein that regulates apoptosis, a new discovery which has implications for both the diagnosis and treatment of cancer. Published in the journal *Molecular Cancer Research*, the protein could be targeted to re-activate apoptosis, thereby killing cancer cells.



STUDY FINDS CITRUS FLAVONOID PREVENTS OBESITY

July 2009 - A flavonoid molecule derived from citrus fruit has shown tremendous promise for preventing weight gain and other signs of metabolic syndrome. In a study, published in the journal *Diabetes*, **Dr. Murray Huff** looked at a flavonoid called naringenin. The molecule's insulin-like properties correct many of the metabolic disturbances linked to insulin resistance which could have a drastic impact in preventing Type 2 diabetes and lowering the risk of cardiovascular disease.



VITAMIN B DANGEROUS FOR DIABETICS WITH KIDNEY DISEASE

April 2010 - In a study that looked at a current treatment for diabetics with kidney disease, **Dr. David Spence** has discovered that diabetics receiving high dose vitamin B therapy had significant worsening of kidney function and had twice as many heart and stroke incidents. Published in the *Journal of the American Medical Association*, this research will change treatment practices and help improve outcomes for millions living with diabetes.



MESSAGE FROM THE DEAN

Welcome to Discovery! As the new Dean of the Schulich School of Medicine & Dentistry and Interim Director of Robarts Research Institute, I invite you to read on and learn more about the groundbreaking research taking place here. As a scientist at Robarts for the past 20 years, I know first-hand about the remarkable work being done in areas such as neuroscience, vascular research, imaging and clinical trials. My own research has been tremendously strengthened by my association with Robarts, a sentiment that I know is shared by a great number of my colleagues.

The international reputation of Robarts is built on seminal discoveries that have fundamentally changed the way in which we think of a number of conditions: cardiovascular disease, stroke, and disorders of the nervous system. Our imaging researchers are among the world's leaders while our clinical trials group is conducting



BIOLOGICAL LINK BETWEEN STRESS, ANXIETY AND DEPRESSION

April 2010 - By identifying the connecting mechanism in the brain, **Stephen Ferguson, PhD**, has discovered the biological link between stress, anxiety and depression. This high impact research published in the journal *Nature Neuroscience* also reveals a small molecule inhibitor developed by Ferguson, which may provide a new and better way to treat anxiety, depression and other related disorders.



IMPROVING LIVES FOLLOWING A SPINAL CORD INJURY

June 2010 - Working on a new therapy designed to limit the damage caused by inflammation following spinal cord injury, **Gregory Dekaban, PhD; Arthur Brown, PhD; Lynne Weaver, PhD; and Paula Foster, PhD**, have received a grant from the United States Department of Defense that will move their work closer to a clinical trial and help those with a spinal injury make significant improvements in recovery.



NEW WAYS FOR CONTROLLING CHOLESTEROL

August 2010 - **Dr. Robert Hegele** is the senior Canadian author for a study published in *Nature*, involving 200 researchers worldwide, which identified the genes that control cholesterol. This study makes it possible to develop a blood test that would directly determine whether patients carry the precise genes that put them at risk for heart disease, allowing them to take precautions while they are still healthy.

groundbreaking research using novel clinical trials design. None of these accomplishments would have been possible without the uniquely collaborative environment that is found at Robarts.

As we move forward, you will hear about the creation of citywide centres of excellence, several of which are based at Robarts, including the recently announced Biomedical Imaging Research Centre. This centre is focused on the development of innovative imaging techniques and technology to improve the understanding, diagnosis, and treatment of human disease. It also has a very clear vision supported by Robarts: to be the best integrated biomedical imaging research program in Canada and to rank among the top five in the world.

Through times of change and growth, Robarts has remained focused on bringing outstanding medical research faster to clinical trials, to patients and to the world. Together with Schulich Medicine & Dentistry and The University of Western Ontario, Robarts remains committed to this mission and we look ahead to future groundbreaking discoveries.

Sincerely,

Michael J. Strong, MD, FRCPC
DEAN, SCHULICH SCHOOL OF MEDICINE & DENTISTRY
INTERIM DIRECTOR, ROBERTS RESEARCH INSTITUTE

IT'S ABOUT THE SIZE OF A FIST, WEIGHS BETWEEN 250 AND 350 GRAMS AND BEATS 72 TIMES A MINUTE. IT'S CENTRAL TO OUR FUNCTIONING AND IT'S THE FOCUS OF THE WORK OF TERRY PETERS, PhD, AND DR. JAMES WHITE.

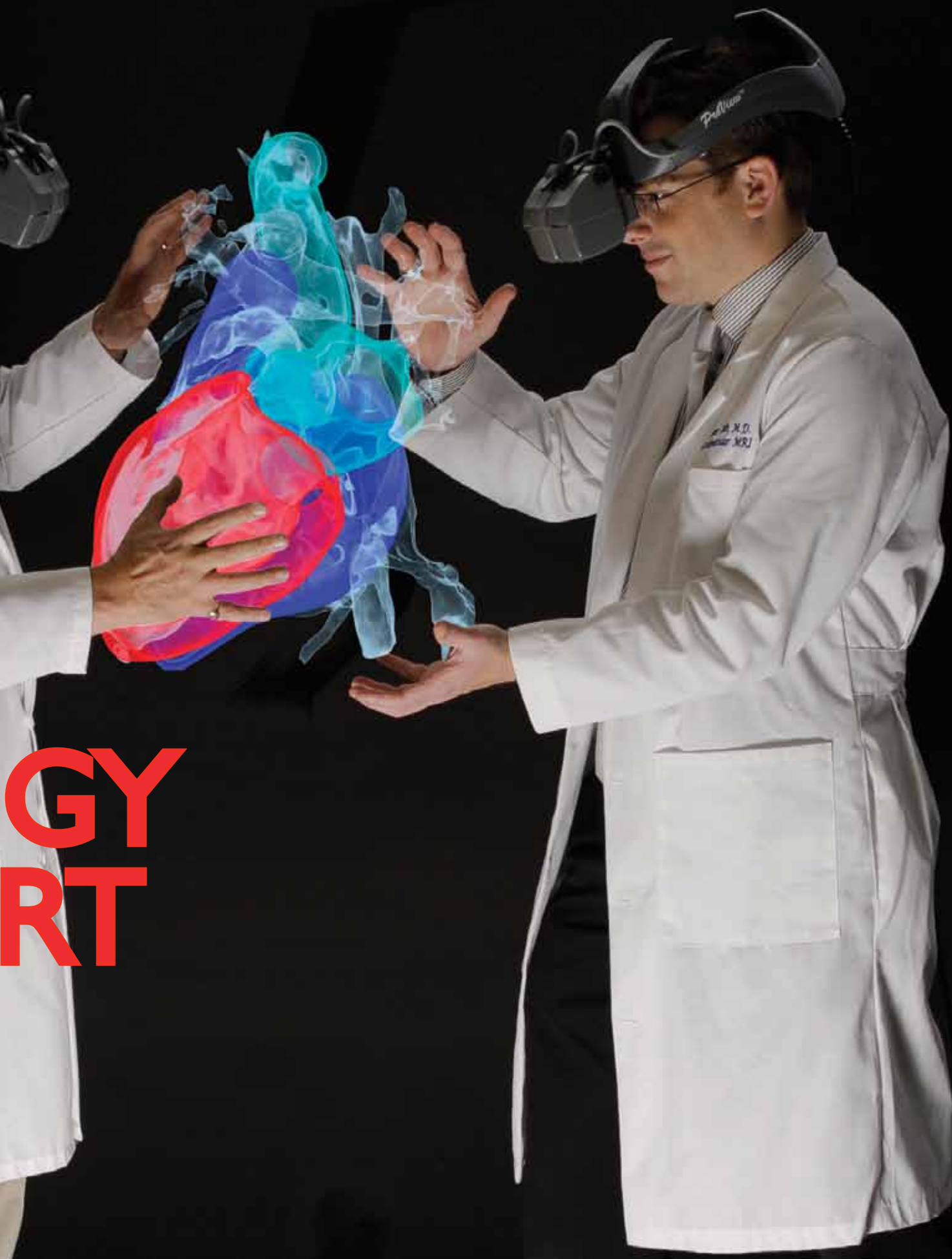
Dr. James White is a cardiologist at London Health Sciences Centre and director of Robarts' Cardiovascular Magnetic Resonance Imaging (MRI) Clinical Research program. White describes the program mandate as providing "translational research – opportunities for applying evolving imaging technologies and MRI to treat cardiac patients." In September 2010 he published a groundbreaking paper in the Journal of the American College of Cardiology: Cardiovascular Imaging, demonstrating a new 3-D technique to improve outcomes for patients requiring pacemakers, angioplasty or coronary bypass.

3-D TECHNOLOGY FUTURE OF HEART TREATMENTS

BY LAURIE MERYL BURSCH (BA'87)



GY
RT



“We’ve known for some time that myocardial (heart) scar tissue can be imaged using MRI, but... this is the first time we have been able to visualize myocardial scar and the heart’s blood vessels at the same time,” says White. “We are able to construct a three-dimensional model of a person’s heart to immediately understand the relationship between the heart’s blood vessels and related permanent injury.”

HEART DISEASE IN CANADA:

- ACCOUNTS FOR 30% OF ALL DEATHS
- IS THE LEADING CAUSE OF HOSPITALIZATION
- COSTS THE HEALTH SYSTEM AN ESTIMATED \$22 BILLION PER YEAR

The images show where the heart arteries and veins are, and if there is scarring, so the doctor can then avoid that region during procedures. “We feel that this is actually going to change, quite dramatically, how we deliver therapies, such as pacemakers for the treatment of heart failure,” explains White.

The technology is also being used to develop personalized treatment strategies and therapies for those suffering from coronary artery disease, minimizing the risk of coronary bypass surgery.

Cardiologists and surgeons have been relying on multiple imaging techniques to provide information that must then be mentally synthesized. By delivering all of the relevant information in a single 3-D model,

surgeons will be able to “spin around the heart and look at it upside down if they need to” when planning the best way to deliver care.

Terry Peters is using a different set of imaging tools to try to improve outcomes and recovery time for cardiac surgery patients. One of his current goals is to create 3-D models that will allow surgeons to perform interventions inside a beating heart

through virtual surgery.


“We use images of the heart from MRI or Computerized Tomography (CT) before the operation and combine them with inter-operative ultrasound in a virtual reality environment to provide a three-dimensional view that shows the heart, and the instruments that we have placed inside the heart, along with an ultrasound view that gives us the real-time information about the actual location of the target,”

explains Peters.

“We’re setting the stage for demonstrating that some of these techniques can be effective and much less invasive than the traditional surgical techniques.” It is an important innovation because if cardiac patients can receive surgery without having their chest cut open, the recovery time is shorter with less chance of infection or setback.

Peters believes this technology will open the door to many new surgical procedures in the heart and elsewhere. “We’re also working on similar techniques to inject anesthetics into facet joints in the spine or for epidural anesthesia – during labour, for example.”

Both researchers are excited by the opportunities afforded by Robarts and its research community. “I think the most exciting thing is that we’ve been given the opportunity here to work on one of the best pieces of equipment, in one of the best facilities in the world,” says White. “And what really is unique about this location is that I come to work, and on the way through the door, I say ‘hi’ to a number of world-leading experts that can translate my ideas and my imaging into completely radical and new approaches for treating cardiac patients.”


Ultimately, like all Robarts scientists, both Peters and White are striving towards the same goal: helping people live healthier, longer lives. 

DR. JAMES WHITE AND
TERRY PETERS, PhD OF
ROBARTS RESEARCH INSTITUTE



MILLIONS OF CONNECTIONS, MILLIONS OF OPPORTUNITIES

BY SHANNON ENGLISH (BMSc'05)



THE BLOOD FLOWING IN
OUR VEINS AND THE
IMPULSES TRAVELLING TO
AND FROM OUR BRAINS
CONNECT EVERY CELL IN
OUR BODIES. AND WHEN
THOSE CONNECTIONS
STOP WORKING, BELIEVE
IN RESEARCH.



DR. CECIL AND
MRS. LINDA RORABECK

For Dr. Cecil and Mrs. Linda Rorabeck, believing in the promise of medical research led them to donate \$1 million to support neuroscience and vascular biology research at Robarts Research Institute.


“We believe in science, basic and applied, and we

both believe in supporting excellence,” says Dr. Rorabeck (MD’68, DSc’09 honoris causa). “Robarts is helping redefine excellence internationally, and we want to continue to support that and make it even stronger.”

The Rorabecks’ quiet but generous contributions to their community through many years of philanthropy, volunteer and professional work has helped strengthen many organizations. Dr. Rorabeck is one of the world’s leading experts on hip and knee replacement surgery, a Professor Emeritus at The University of Western Ontario and former Chair of Orthopaedic Surgery at Western and London Health Sciences Centre. A Western graduate, he received an honorary degree from his alma mater in October 2009 in recognition of the worldwide impact he has made in medicine and his dedication to the community.

Rorabeck has also served as interim CEO and Scientific Director at Robarts and is the current Robarts Council Chair. “Having had the opportunity to be involved at Robarts I’ve come to really appreciate the value of the research done at the institute and the possibility of future discoveries.”

The Rorabeck gift is being combined with another donor’s \$500,000-bequest to the Schulich School of Medicine & Dentistry. The \$1.5 million will then be matched by the University to create a \$3 million endowed chair. The Cecil and Linda Rorabeck Chair in Molecular Neuroscience and Vascular Biology will support an appointed scientist at the new Robarts Centre for Molecular Neuroscience and Vascular Biology, which aims to discover and bring new therapies to patients with conditions such as Alzheimer’s, stroke and heart disease.

From nerves and arteries in a lab to combating dementia and keeping hearts healthy, the support for research at Robarts will help bring results to patients faster. Dr. Rorabeck hopes their gift will also inspire others. “I have been fortunate to see from the inside the extraordinary work and resources it takes to develop and bring discoveries to patients. The size of the gift probably doesn’t matter – it’s how it’s used. Linda and I have chosen to invest in scientists who ultimately will be able to translate their discoveries from the lab to the bedside.” 

Who says
time
can't stand still?



Scientists at Robarts Research Institute are imaging beating hearts and thinking brains, working to detect the many diseases associated with aging and to provide the right information

for doctors to deliver the best therapy. With your support, research at Robarts is turning back the clock, helping us all live longer, healthier lives.

Support this and other world-class research at Robarts by calling 519-931-5276 or visiting www.robarts.ca/donations



“Western has a reputation of welcoming students who are activists and want to make a difference in the way medical education takes place – and the impact medicine has on society.”

DR. DANIELLE MARTIN (MD'03)

Making Medicare Matter

“**W**hen it comes to health care reform, Canada has been a country of pilot projects,” says Dr. Danielle Martin (MD'03). “We seem to have difficulty as a nation elevating from a level of a pilot project or individual community doing something well to implementing that more broadly. That’s a real difficulty.” And so, she works to rally her colleagues to remedy this and other challenges within Canada’s health system.

Martin’s passion for advocacy drew her to Western for her medical degree. “I think Western has a reputation of welcoming students who are activists and want to make a difference in the way medical education takes place – and the impact medicine has on society,” she says.


Martin is making a difference daily in caring for the community of Geraldton in Northwestern Ontario, tending to her family practice patients at Women’s College Hospital in Toronto and teaching medical students at the University of Toronto. She wants to make sure that quality public health care for every Canadian is not just theory, but practised.

As the founding Chair of Canadian Doctors for Medicare, Martin and her colleagues promote accessible health care, in part, by sharing best practices in hopes that more pilot projects take flight across the country – and beyond.

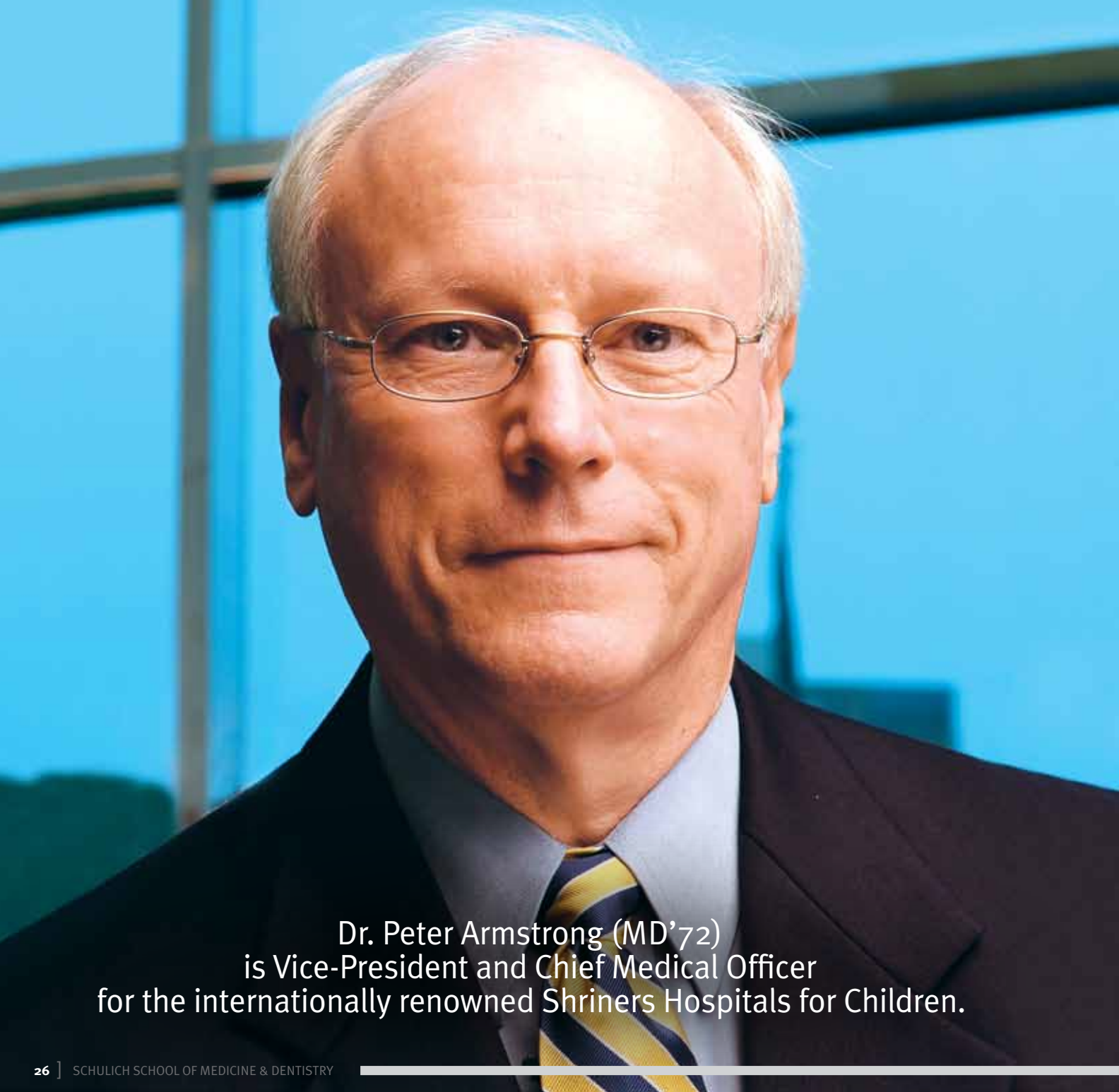
That’s where Canadian Doctors for Medicare’s website, www.mybettermedicare.ca, comes into play. Launched in August 2009, it’s an online resource for the medical community to share success stories. And though it’s still in its infancy, Martin says it’s a key tool. “Most of the challenges people face in their communities have been solved somewhere, but you may not know that.”

As Canadian Doctors for Medicare encourages Canadians to share best practices across the nation, it has also become a resource for American health care providers and policymakers interested in learning how Canada’s health care system works.

“There’s definitely interest from American physicians who are beleaguered by bureaucracy and who are driven by the fear of malpractice suits instead of what they believe is the best clinical care.” She says they look to Canada because, while the system may be imperfect, it does not experience nearly the level of difficulty in serving patients.

Ultimately, Martin advocates quality care across the nation and beyond. “We have a dual responsibility as doctors to our individual patients, but also to the broader community. We can’t achieve our underlying goal of better health care without working on both of those levels.” 

Providing Kids with World-Class Care

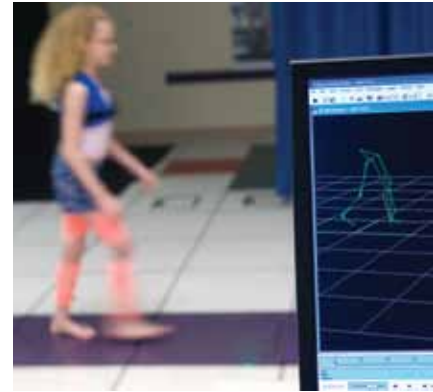


Dr. Peter Armstrong (MD'72)
is Vice-President and Chief Medical Officer
for the internationally renowned Shriners Hospitals for Children.

An elevator seems like an unlikely place to make a life-altering decision about one's career but for Western Medicine alumnus Dr. Peter Armstrong (MD'72), that's what happened in his youth. As part of a social group affiliated with the YMCA in his hometown of Owen Sound, Ontario, Armstrong would spend time at the then-named Owen Sound General and Marine Hospital. "I would volunteer every time to run the elevators and was determined that I was going to walk the halls of that hospital as a doctor."

Though he never practised medicine in Owen Sound, he has walked the halls of some notable medical institutions throughout an impressive career that began in London, Ontario.

"There was never any doubt in my mind that I was going to go to Western," he says on the phone from his office at the Headquarters for Shriners Hospitals for Children in Tampa, Florida.



"I knew Western had an excellent reputation and I never regretted my decision. Ever." Surgical rotations at St. Joseph's Hospital in London turned his attention to surgery.

After graduation, he served three years in Germany as part of the Canadian Armed Forces Medical Officers Program, and then returned to Toronto in 1976 to begin his orthopaedic residency, which included a year of research on thromboembolism. His work led him to the Hospital for Sick Children in Toronto, where he cared for children alongside his mentor, the late Dr. Robert B. Salter.

In 1991, Armstrong's career took a turn when he accepted a job as Chief of Staff at the Shriners Hospital in Salt Lake City. After close to 10 years in that position, he was asked to take on his current role at the Shriners Hospitals headquarters in Tampa.

As Vice-President of Medical Affairs and Chief Medical Officer, he oversees the 23 chiefs of staff at 22 Shriners Hospitals in United States, Canada and Mexico. It's a gratifying role, he says, because of the influence the hospitals are having on the care of children across North America and beyond.

The Shriners Hospitals for Children are dedicated to improving the lives of children through paediatric specialty care, innovative research and outstanding teaching programs for medical professionals. The hospitals are world-renowned for excellence in burn care, cleft-lip and palate treatment, orthopaedics, and spinal cord injury rehabilitation.

"We have really determined the standard of care for children who are burned worldwide because of all the clinical work and research we've done," he explains. "We're also developing a reputation in spinal cord injury rehabilitation because our Sacramento (California), Chicago and Philadelphia hospitals are the only Shriners Hospitals that have specialized treatment programs just for children and adolescents."

Shriners hospitals have also cared for countless children from outside the United States. Mexico, in particular, has relied on the care provided by the Galveston, Texas, and Sacramento locations.

Presently, the Shriners have set up fellowships at the Sacramento location to train two Mexican doctors in burn care who will work in the Shriners Hospital in Mexico City.

It's a close relationship that was recently honoured by Mexican President Felipe Calderon and First Lady Margarita Zavala. Armstrong accepted an award thanking the Shriners organization for its care of Mexican children, including the aid provided after a horrific fire at a daycare centre in Hermosillo, Mexico.

Through his role, Armstrong is making a difference globally by managing a large network of hospitals that employs some of the best and brightest paediatric specialists in the world. "I believe in the mission of Shriners Hospitals for Children, which is excellence in patient care, research and teaching. Those of us who have worked in academic medicine know that those three things are inextricably linked."

"Through Shriners Hospitals for Children, we impact those who come to us for care. And through our research and teaching, we impact the lives of children around the world who will never come to a Shriners hospital. That's what brings me in every morning." 🌟

IN 2009, SHRINERS HOSPITALS FOR CHILDREN CARED FOR 123,844 PATIENTS ACROSS ITS 22 HOSPITALS IN UNITED STATES AND CANADA

Photos courtesy of Shriners Hospitals for Children



Choosing Windsor

One of the first to train in Windsor, family doctor Helena Hamdan (MD'05) now calls the city home.

Dr. Helena Hamdan (MD'05) is a pioneer: she was one of the first medical students at Schulich Medicine & Dentistry to make the move to Windsor for training. Now she's made it permanent.

In 2003, Schulich Medicine & Dentistry expanded clinical training for the third year of medical school to the Windsor area. It began with just nine students and Hamdan was one of the first on board.

She transferred to Western after beginning medical school at the University of Ottawa. Her reasons for relocating to Windsor were both professional and personal – she had heard good things about the new program, and her husband was working in Detroit at the time.

Right away she knew she had made the right move. “Being such a small and new program we received more exposure in rounds,” Hamdan explains. “We had more one-on-one teaching. That’s how it was presented to potential students, too, so I decided to attend (Windsor clinical training) instead of going to a traditional teaching hospital setting.”

That intimate training environment continues. In 2008, the training blossomed into the Schulich School of Medicine & Dentistry – Windsor Program, with 92 students currently enrolled. In fact, Hamdan is now teaching Windsor Program students and is proud to be part of “changing the way things are done.”

As for being one of the first graduates to train and complete her family medicine residency in Windsor, Hamdan says she doesn’t think about it that way because the program didn’t feel new. “Even in its infancy, it went very smoothly. I enjoyed myself a lot more than my colleagues who stayed behind in Ottawa.”

After graduation, Hamdan chose to set up her practice in Windsor. She says that despite a reputation for having a dearth of doctors, Windsor is “much better than many cities” in how it has responded to the need for specialty care.

The hospitals are working hard to improve the way patient care is managed and provided. “The hospitals are not set in their ways. If they think they can do something better, they give it a try.” The result of this flexible attitude has been better care for patients and more hands-on experience for medical students.

That practical experience is a big draw for students, says Hamdan. And that is good for the city and the care provided to its residents.

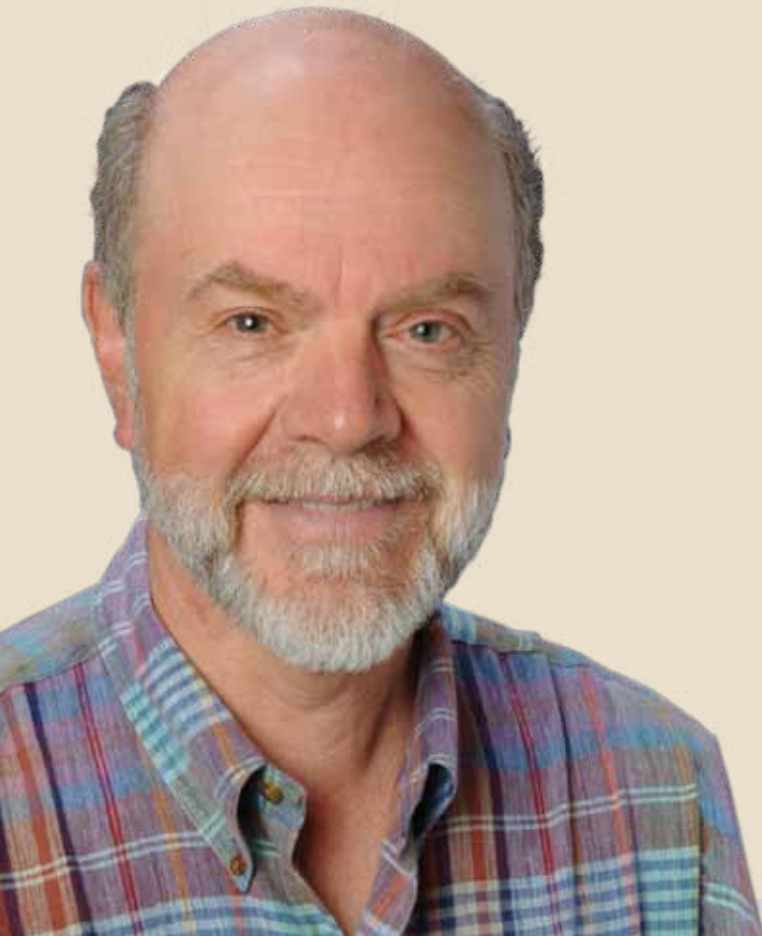
The region is already having success recruiting and retaining talented doctors because of the Windsor Program. “Studies show that doctors stay in the areas where they train because they’re comfortable. They know colleagues, consultants and how the hospitals work,” Hamdan explains. “Plus, if you work in an area long enough, you don’t want to leave; it becomes your home.”

A Lifetime of Helping Children with Special Needs

BY KRIS DUNDAS (BA'94, MA'95)

“It’s nice to know you can do something for a child others can’t do... I love that feeling. It’s very uplifting. It’s my passion.”

DR. BRYAN WILLIAMS (DDS'74)



At age 60, Dr. Bryan Williams (DDS'74) laughs when he admits he's still trying to 'make something of himself.' Though the accomplished paediatric dentist and orthodontist held the position of Dental Director at Seattle Children's Hospital for 16 years, has taught hundreds of residents in specialty care and holds two masters degrees, the only thing that makes him feel proud is helping children.

“It makes me feel really good and it's nice to know you can do something for a child others can't do... I love that feeling. It's very uplifting. It's my passion.” As a specialist who practises both paediatric dentistry and orthodontics, Williams treats children with complex medical issues, developmental disabilities, cleft lip, cleft palate and craniofacial anomalies.

These children often have difficult issues with dental care, he explains. “It is challenging just managing a child with medical needs, the family can't handle dental care on top of it all.” Then there are the practicalities of getting to a dental office, including mobility and transportation issues, and finding a practitioner and office staff comfortable with treating children with special needs.

Hailing from Vienna, Ontario, a small town near Tillsonburg, Williams never imagined where his path to Western would take him. After two years in honors science he was accepted to the Faculty of Dentistry. After graduation, he worked in general dentistry in London and taught part-time at the School before heading to the prestigious University of Washington for specialty training.

“I really thank my lucky stars I went to Western. It set me up for my whole career,” says Williams. “The quality of my dental education was amazing.”

He returned to live in Windsor and spent three years as Acting Chair of Orthodontics at the University of Detroit. Over the next eight years he built an orthodontic practice where he treated many children with special needs. In 1990 he was recruited to Seattle where he established specialty clinics, helped thousands of children, and played a major role in educating practitioners in the region and internationally.

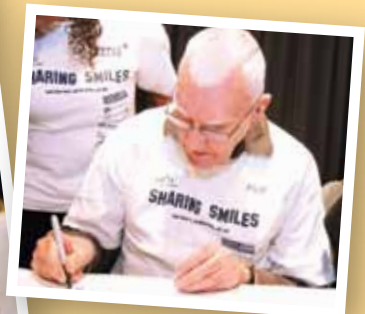
Despite considering himself 'semi-retired,' Williams still works steady hours in two clinics: Seattle Special Care Dentistry and Bellevue Pediatric Dentistry & Orthodontics. Through Health Volunteers Overseas, he has treated patients in India, South Africa and Saudi Arabia.

Williams also continues his other lifelong passion: teaching. At Seattle Special Care Dentistry, he trains dental residents in a special care program with Swedish Medical Center and continues to teach orthodontic students in the management of children with cleft palate and craniofacial anomalies. “I love when a resident picks something up – a procedure or technique you have modelled for them – you see that light in their eyes when they have figured out how to help someone. I feel even better than when I do it myself.”



Sharing Smiles Day

BY TODD DEVLIN (MA'09)





Schulich Dentistry launched another exciting outreach program last year, as the school hosted London's first-ever 'Sharing Smiles Day,' an event aimed at removing barriers, raising awareness, and educating students and dentists about the importance of oral health care for persons with special needs.

Close to 250 people – including 100 students and 100 special needs participants – attended the event last April, which was a partnership between Schulich Dentistry, Community Living London and 'Oral Health, Total Health.' The day included games led by the dental students, a luncheon and demonstrations by faculty dentists on proper oral care.

"It was pure, natural fun between the client and the student, and that's the connection we wanted," says Jeremy McCallum, a third-year Schulich Dentistry student who co-chairs the London chapter of Oral Health, Total Health.

"Initially, (the participants) were a little timid. But then when they walked into the room where we had games, it was hard not to smile."

Michelle Palmer, Executive Director of Community Living London, was also extremely pleased with the event.

"It was the perfect combination of fun and learning," she says. "Dental students learned about providing adapted dental care, and the people we support learned that the future dentists they met are lots of fun and not to be feared."

Dental care is one of the top unmet health needs for persons with special needs, and research has shown that this client population is at an increased risk of oral disease. Unfortunately, individuals with physical and/or intellectual disabilities have trouble finding care in their communities – in part due to dentists' lack of comfort with special needs patients, as well as misconceptions about treatment.

That's a situation that McCallum and his colleagues hope to change.

"The students got the chance to interact with the special needs participants and see them as people," McCallum says. "Now they will be more likely to make a commitment to treating (special needs patients) when they graduate, increasing access to dental care for this population."

Dr. Harinder Sandhu, Director of Schulich Dentistry, takes a great deal of pride in the outreach program. "This is the most amazing initiative undertaken by our dental students," he says. "Schulich Dentistry trains students to be socially responsible, and this is a wonderful example of that."

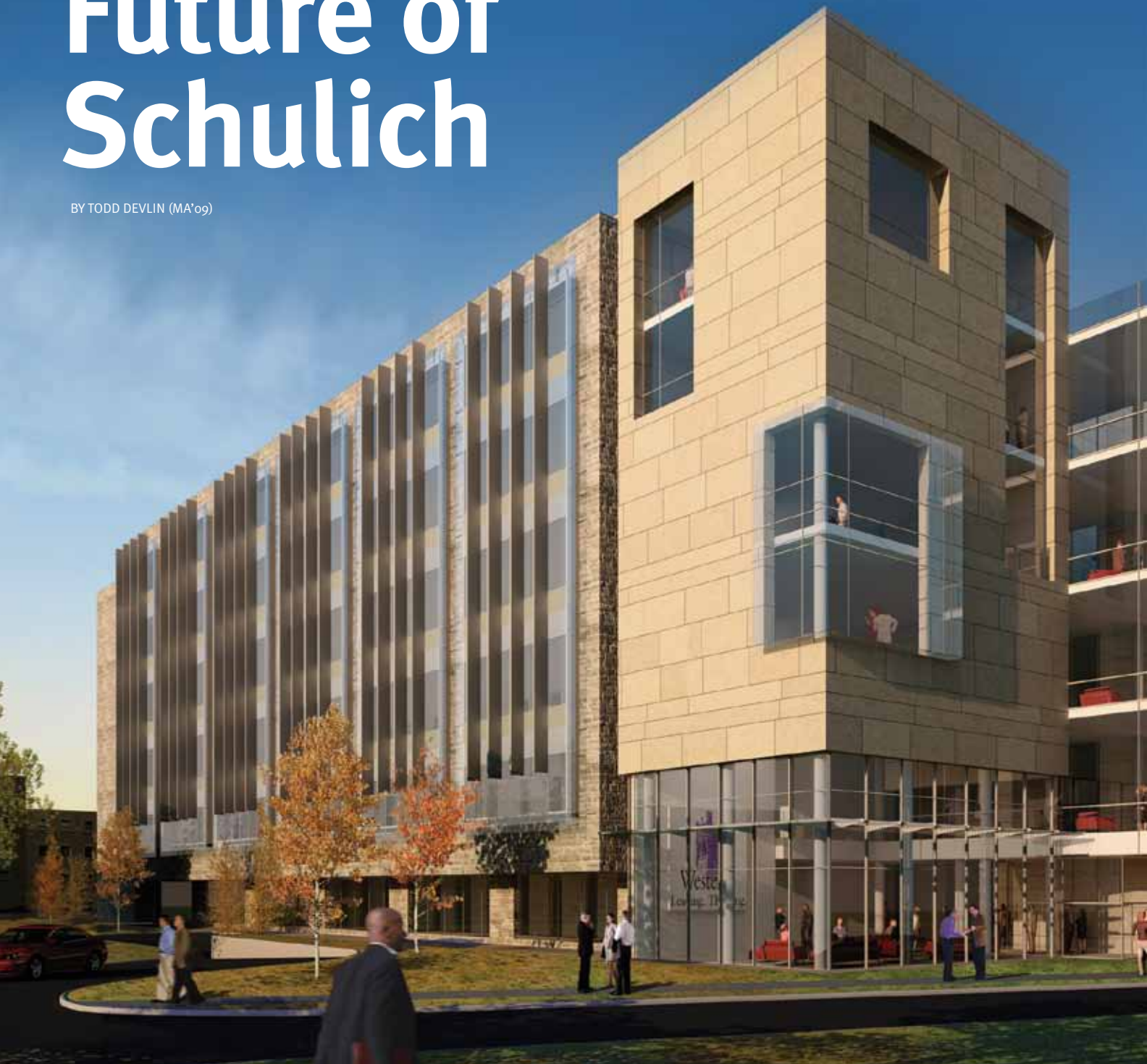
McCallum and his team are now looking ahead to the second annual 'Sharing Smiles Day.' This year's event will be held on March 27, 2011 from 10 am-2 pm at The Great Hall on Western's campus. 🌐

FOR MORE PHOTOS VISIT
www.schulich.uwo.ca/rapport



Building the Future of Schulich

BY TODD DEVLIN (MA'09)



“We have great researchers and a fantastic educational program, but to get to that next level requires a whole new approach.”

DEAN MICHAEL STRONG



ARTIST'S RENDERING OF PROPOSED NEW BUILDING AT WESTERN FOR SCHULICH MEDICINE & DENTISTRY

It's an ambitious project, to be sure. But Dean Michael Strong believes the addition of a new state-of-the-art building will help usher in a new era for the Schulich School of Medicine & Dentistry, positioning it as a leader in research and education.

“We want to be one of the top five medical schools in North America, and we need the facilities to do that,” Strong says. “We have great researchers and a fantastic educational program, but to get to that next level requires a whole new approach.”

That approach will include a significant construction project to both enhance the practical aspects of Schulich Medicine & Dentistry and also attract students, faculty and leading researchers. The design will reflect how people want to come together to share ideas, solve problems and shape research as it unfolds.

“This fits nicely with everything that (Western) wants to do,” Strong explains in reference to the strategic goals that are driving the university's major fundraising campaign. “And this is everything we need to do to really bring us into the 21st century.”

The building project is the result of a Condition and Space Requirement Review conducted by Diamond and Schmitt Architects in the spring of 2008.

“That identified a need for approximately 200,000 square feet of additional space by 2018,” says Kevin Inchley, Senior Facilities Consultant at Schulich Medicine & Dentistry. “Three options were developed and reviewed, and we identified one as the preferred option and developed various budget models.”

That option includes a new 195, 612-square-foot building on the west side of the Medical and Dental Sciences Buildings.

Though a need for space was the driving force, Strong sees this project as an opportunity to transform the School. He envisions a building that is programmatic in nature and allows for interdisciplinary communication and collaboration.

“It has to speak to what we actually want to be doing in terms of asking health care questions and improving health care delivery,” he says.

He also wants the new building to create a stronger sense of community – both within Schulich Medicine & Dentistry and between the School, the city and the region. Internally, that means an open-concept design with plenty of community space. Externally, that means using the building as a community health resource and a place for meetings and events.

From an architectural standpoint, he'd like it to evoke a reaction and emotion from visitors to the Western campus and serve as a recruiting tool. “We want to create an environment and a facility so that when students come and look at this, the first thing they say is, “This is where I want to go to school.” ☺

FOR MORE INFORMATION ON SUPPORTING SCHULICH MEDICINE & DENTISTRY'S BUILDING PROJECT, CONTACT GILLIAN SNEDDON, DIRECTOR OF DEVELOPMENT AT GILLIAN.SNEDDON@SCHULICH.UWO.CA OR 519-661-2111 EXT. 82247



Knock-out Teacher

BY MARK KEARNEY

“King Faisal” has won more than 20 teaching awards in the seven years he’s been at Western, the most prestigious being the University’s 2010 Marilyn Robinson Award for Excellence in Teaching.

The cards tell the story.

Pinned at various angles and sometimes overlapping, the cards cover a good wall and a half of Dr. Faisal Rehman’s office, some of them from grateful patients but most from students he has helped shepherd into successful medical careers. Though he comes across as upbeat and cheerful, Rehman says those cards give him a lift when he’s having a bad day.

But bad days are not likely a part of the equation in his teaching. Rehman, affectionately known by students as “King Faisal,” has won more than 20 teaching awards in the seven years he’s been at Western, the most prestigious being the University’s 2010 Marilyn Robinson Award for Excellence in Teaching.

“It’s nice to be recognized. When anyone enjoys what they’re doing – like I do – they often get rewarded for it. It’s a great honour.”

But Rehman doesn’t teach for awards. For him, the joy comes from his students and passing on his knowledge as Director of Nephrology at the London Health Sciences Centre. He teaches all levels of undergraduate medicine as well as residents and is the Honorary President of the Class of 2011.

Teaching doesn’t just happen in the classroom for Rehman. He takes time to get to know students personally and gladly meets with them after hours to help.

Rehman’s talents aren’t just confined to the classroom; he’s also a boxer who stepped into the ring during last year’s fundraiser for kidney disease research that raised \$117,000. Rehman took up the sport and trimmed down from 242 pounds several years ago to fight in the 165-pound weight class. And he speaks about boxing with the same enthusiasm he brings to teaching. “I love it.”

Rehman hadn’t planned on teaching when he came to Western to study internal medicine, but began to realize how much he enjoyed working with people. For him, successful teaching is about “minimizing the power structure that exists between a teacher and a student.”

Medical students face anxious times learning to become doctors, he says, so “you have to be patient and add humour into the mix.” Rehman believes the students see him more as a colleague who can offer advice. “It’s more of a team atmosphere.”

Greg Devet, a fourth-year medical student, says Rehman “makes everyone feel comfortable” noting that he “has the capacity to take any answer from a student, validate it and encourage the student to keep learning.”

Some students have spoken so highly about him that it’s helped draw others to Western from across Canada. Randah Dahlan, who came from McMaster for a rotation, decided to stay for her fellowship because of Rehman.

“I think he’s just so talented,” says Dahlan. ☺

Our Research Impact

450

Number of **different journals** (by title) in which Schulich scientists published their work, including top-rated journals such as the *New England Journal of Medicine*, *Nature Medicine* and the *Canadian Medical Association Journal*



23

Canada Research Chairs (1/3 of all Canada Research Chairs at Western)

\$140 million

Total amount of **research funding** for 2009-10

\$32 million

Tri-council funding (CIHR/NSERC/SSHRC*) in 2009-10

350+

Number of **faculty** with external peer-reviewed research funding (from Research Mission 2012)

11

Number of **graduate programs** in medical sciences

568

Number of **graduate students**

7

Areas of Research Excellence at Schulich Medicine & Dentistry (Biomedical Imaging; Cancer; Cardiovascular, Respiratory Health, and Metabolic Diseases; Infection and Immunity; Musculoskeletal Health; Maternal, Fetal, Child and Family Health; Neuroscience and Mental Health)

37

Number of city-wide core **research facilities** available for use by researchers within Schulich Medicine & Dentistry



* CIHR STANDS FOR CANADIAN INSTITUTES OF HEALTH RESEARCH, NSERC STANDS FOR NATIONAL SCIENCE AND ENGINEERING COUNCIL OF CANADA, SSHRC STANDS FOR SOCIAL SCIENCES AND HUMANITIES RESEARCH COUNCIL OF CANADA

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