Issue Four
Summer 2009

ALUMNI MAKING A DIFFERENCE
A DAY IN THE ER
YEAR ONE IN WINDSOR

PLUS...

Pushing The Frontiers
LONDON’S LEGACY IN TRANSPLANT RESEARCH LIVES ON

The University of Western Ontario
Contents

EDUCATION

6 Year One in Windsor
Reflecting on the first year of the Windsor Program

8 A Day in the ER
Follow resident Dr. Cimi Achiam on an eight-hour shift in Emergency Medicine

12 A Crowning Achievement
Dentistry adopts manufacturing technology for teaching

RESEARCH

13 Pioneering Miracles
London's legacy in transplant research lives on

16 Stem Cell Success
Robarts scientist David Hess finds a needle in the scientific haystack

17 25 Years of Improving Primary Care
An interview with Moira Stewart, Director of the Centre for Studies in Family Medicine

ALUMNI MAKING A DIFFERENCE

18 Changing the World One Day at a Time
Dr. Jane Philpott's initiative has raised more than $2 million for HIV and AIDS relief in Africa

21 Going the Distance in the Desert
Canadian Forces dentist Dr. Mehmet Danis wins the world’s toughest endurance race

22 Tour of Duty
Meds grad Dr. Mark Thibert shares his experience in Afghanistan

IN EVERY ISSUE

3 Dean's Message

4 Check Up

23 In Profile: Teaching at Schulich

25 Fundraising Highlights

26 After Class

27 By the Numbers
No Holding Back

Over the last 10 years since I took up my post as Dean I have been inspired by an amazing collection of faculty and staff, and by wonderful students across all our programs. I’ve also had the pleasure of interacting with outstanding alumni through Homecoming and other activities.

It has been a decade of tremendous change and growth. Highlights include the naming of the School, substantial renovation and construction, rapid expansion of research and education programs, the development of medical education in Windsor and the rest of Southwestern Ontario, and the integration of Robarts Research Institute. These successes and more are illustrated in our back-page feature “By the Numbers.”

The pace of change has challenged us to maintain cohesion as we have become larger and more complex. But we are also energized by it. Our inaugural year of the Windsor Program is proof of the excitement on our horizon, as is the research potential in transplantation, stem cell biology and primary care profiled in this issue.

As for the next 10 years, we have an ambitious plan to revitalize and grow our current space, to evolve our education programs, and to strategically build upon our research strengths.

While 2009/10 will be my last year as Dean at Schulich Medicine & Dentistry, I won’t be holding back. We have much work ahead to make the School ready for a new academic leader and to continue its remarkable 128-year legacy. I look forward to working with all of you to make it our best year yet.

Sincerely,

[Signature]

Dr. Carol P. Herbert, Dean
Ontario is boosting the number of first-year medicine spaces by 100 over the next two years, with 24 coming to Schulich Medicine & Dentistry. Ten new spaces will be added to London and 14 to the Windsor Program, bringing the total class size to 171 by 2010. The School also received $4.2 million designated to complete construction of the University of Windsor’s Medical Education Building.

“Ontario must train more doctors, and we’re helping meet that demand. We’re creating more opportunities for medical students to train closer to home, connect with the local medical community and prepare for careers where they study,” said Minister of Training, Colleges and Universities John Milloy.

Dean Carol Herbert emphasized the impact of the new spaces, noting 12 more students were accepted for September 2009. “We’re pleased the government is putting more resources into training new doctors to meet the needs of underserviced areas throughout the province.”

The new Centre for Education Research and Innovation will support medical and dental education scholarship, foster medical/dental education as a career path and provide consultation on education issues across the School. Its mission is to provide a robust community of education researchers and scholars at Western.

Lorelei Lingard, PhD is the Founding Director of the new Centre. One of the world’s leading education researchers, Lingard joins Western from the University of Toronto where she was Associate Professor in the Department of Paediatrics, Scientist in the Wilson Centre for Research in Education, and Senior Scientist in the SickKids Research Institute.

Her research investigates the nature of communication in interprofessional health care teams.
Trailblazers receive honorary degrees

Western conferred honorary degrees on Dr. Wesley Dunn, founding Dean of Dentistry and Dr. James Rourke (MD’76, MCIsC’93), former Assistant Dean, Southwestern Ontario Medical Education Network.

Dr. Wesley Dunn was Dean of the Faculty of Dentistry from 1965 to 1982. He not only shaped dental education at Western but influenced education and practice across the country through active roles with the Canadian Dental Association, the Royal College of Dental Surgeons and as former editor of the Canadian and Ontario Dental Association Journals and Oral Health. Dunn, now Professor Emeritus, continues to be involved daily in activities at Schulich Dentistry.

Dr. James Rourke is serving a second term as Dean of Medicine at Memorial University but his roots remain at Western. Rourke worked as a family physician in Goderich from 1979 to 2004. His leadership and passion for rural medicine sparked the development of rural and regional education and led the School to establish the Southwestern Ontario Medical Education Network (SWOMEN). He remains one of the world’s foremost experts on rural medicine.

Research garners international attention

Several studies and scientists made headlines worldwide in 2008/09:

- A Robarts/Fowler-Kennedy Sport Medicine Clinic study on arthroscopic surgery of the knee hit The New York Times, Chicago Sun-Times, Washington Post, Los Angeles Times, Toronto Star and The Globe & Mail. The story was also covered by CTV National and CBC National News. Radio interviews were also conducted with the CBC, BBC and Australian Broadcasting Corporation.

- David Bailey, PhD, found grapefruit, orange and apple juices may block the effects of some drugs thereby negating any potential benefit to patients. The findings were reported widely from The New York Times and CBS to Le Figaro and the BBC.

- Dr. David Spence presented a study at the World Stroke Congress showing the majority of patients with narrowed carotid arteries do not need surgery to reduce the risk of stroke. Coverage included Reuters, The Washington Post, Canadian Press, The London Free Press and newspapers in Germany and Switzerland.

- Jack Bend, PhD also hit The New York Times discussing the safety of bisphenol-A or B.P.A.

High honours for Schulich faculty

Two faculty members received the Order of Canada in the past year. Renowned stroke researcher Dr. Vladimir Hachinski, Professor of Neurology and President of the International Society for Vascular Behavioural and Cognitive Disorders, coined the term “multi infarct dementia” and devised the most widely used method of diagnosing it (the Hachinski ischemic scale).

Transplant surgeon Dr. Bill Wall performed the first successful liver transplant in Canada in 1982 and helped build London into a centre of excellence for transplantation care and research. A long-serving Director of London Health Sciences Centre’s Multi-Organ Transplant Program, Wall was also recognized for his active role in promoting awareness of organ donation.

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The School launched a full, four-year medical program in Windsor, Ontario in September 2008, in partnership with the University of Windsor and Windsor hospitals. The program, which uses videoconferencing and other distance education techniques, is a welcome addition to the region – one of the most medically under-serviced in the province.

Photos courtesy of Paula Pavan
Reflections on the first year

“The Windsor Program has had an excellent beginning. The strength of the program was tested in the first months by the Medical Education Building not being ready and by a faculty strike at the University of Windsor. However, the students of the Windsor Program were very supportive of each other and of the efforts by the faculty and staff to deliver the best learning experience possible. The Windsor group has performed well academically and represents the major component in the success that we are experiencing.”

TOM SCOTT, PhD
ASSOCIATE DEAN, SCHULICH MEDICINE & DENTISTRY – WINDSOR PROGRAM
DIRECTOR OF MEDICAL EDUCATION, UNIVERSITY OF WINDSOR

“The year passed by really quickly and I’ve enjoyed every minute of it … At first (videoconferencing) took some getting used to but I think now it’s just everyday routine and I really don’t find that we are at any sort of deficit not having a professor right in front of us. They are always accessible by email and there are other staff who help us at the Windsor campus. The new building is fantastic. Everything’s new and there’s only 24 of us – so we’re really lucky. There’s a class of 30 coming in next year – it’s going to be great … I’m very excited for both my next year in medical school and the incoming students.”

JAY WONG
MEDS 2012, BMSc’08

“My expectations were far exceeded. The staff here is absolutely amazing. They have done everything for us to make sure we had a good experience. I think one of the things that sticks out in my mind is the ceremony when we walked to our new building for the grand opening. We walked in a line in our white coats and people were standing and clapping for us – they parted ways for us as we entered the building. We felt pretty special and that helped us realize the magnitude of just how big and important the Windsor campus is.”

CAITLIN THOMPSON
MEDS 2012

“The first year of the Windsor Program has been a resounding success, as a result of committed students and faculty, supported by outstanding staff in Windsor and London. Schulich Medicine & Dentistry owes a debt of gratitude to the University of Windsor and the Windsor community and its leaders, for unwavering dedication to the dream of medical education in Windsor. Through partnership, we have made the dream of ‘One school: two campuses’ a reality. Our medical students have shown creativity and commitment to maintaining their class spirit through exchanges and other social events that keep them ‘bonded.’”

DR. CAROL HERBERT
DEAN

“This has been a remarkably successful program. Our new Medical Education Building, our local hospitals and health care practitioners in our region have combined to create an exceptional setting for training doctors. There is tremendous support across our community for the program and I think there is a sense of gratitude that Schulich has been willing to partner with us to make it happen.”

DR. ALAN WILDEMAN
PRESIDENT, UNIVERSITY OF WINDSOR
6:45 am
The morning sun is shining at London Health Sciences Centre’s Victoria Hospital when Dr. Cimi Achiam (MD’06) arrives. In green scrubs and brown crocs, her hair tied back, she has had just enough time at home to take her puppy, Burton, outside and grab a coffee.

S
she walks into the maze of hallways in the adult Emergency Department, one of two in the city, where she will run circles over the next eight hours. There are three Pods with 10 stretchers each. Space is tight – the stretchers are less than six feet apart and equipment and supplies line the hallways and every available corner.

Few of the beds in Pod C – for ambulatory care – are filled this early in the morning. “I spend a lot of my day doing this – paperwork,” the third-year resident says as she grabs her first chart of the day. Her first patient is a 46-year-old man having chest pain. In an easy manner, Achiam introduces herself. “I’m a resident here. You can call me Cimi.” Then she asks a series of questions. She is kind but quick. In the emergency department it’s all about being thorough but efficient.

7:40 am
After conferring with the night resident
and staff physician, Achiam takes on her second patient of the day – a young woman with acute renal failure who left hospital three days ago. “The last two nights, I felt like I was dying,” she tells Achiam, who crouches down to look at the girl’s extremely swollen feet. After taking a history, Achiam goes through the patient’s medications one at a time. Then she closes the curtain to examine her.

7:54 am
She returns to one of Pod C’s computer terminals. “The computer system helps you to stay organized and keep track,” she says. “I’m always checking in to see if there are new test results or new patients to see.” The patients are prioritized using the Canadian Emergency Department Triage and Acuity Scale (CTAS). “We see the sickest people first then move down.”

The first patient’s X-rays are back. She pulls the images up on the double screen behind her. No sign of anything unusual. Sometimes they wait for the radiologist’s official report, but other times, such as overnight, they make their own assessment. She finds her staff physician, Dr. Bill McCauley, and they decide to send him home with pain medication and instructions to come back if symptoms worsen. “It’s not like the other specialties. We don’t have daily rounds,” says Achiam. “Teaching takes place moment-to-moment with the only formal teaching every Thursday from 8 to 12.”

8:35 am
The X-ray for patient three is up, a 61-year-old with coughing, chest pains and chills. “She’s got pneumonia,” says Achiam pointing out the white clouds on the image. She grabs the chart and shows McCauley the results. “What criteria are you going to use to see whether she can be discharged?” he quizzes Achiam. She goes over a scoring scale in detail and the clinical evidence. In the end, they send her home with antibiotics.

9:05 am
Achiam has a rare moment to sit down in the Physicians’ Office. Three text books are piled on the desk, each with 3,000 pages. “At my level, I’m familiar with the common problems but acquiring more book knowledge is really important. Anything can walk through the door. It’s the blessing and the curse,” she says, noting she tries to do at least one hour of reading per night. In fourth and fifth year, she will step it up to six or eight hours. “On our exam all 9,000 pages are fair game.”

9:15 am
There’s a new patient to see. She looks up his history – liver cancer, coronary artery disease, cerebral vascular disease, seizure disorder and a host of surgeries. She
heads to bed in Pod A where the elderly man is lying, frail and weak. He doesn’t speak English but his concerned son tells her he can’t get any food down. Radiation may be taking its toll.

11:38 am
Achiam jokes with the nurses in Pod B. “The further we get along, the more we get to know the nurses. We have a good relationship.” Having treated and sent home a man with tingling in his left arm and an 84-year-old diabetic with a weeping leg wound, she moves on to her seventh patient of the day, a 67-year-old cancer patient. It has spread from his lungs to his brain. “There’s a lot of stress at home,” says his wife in tears.

“We deal with this more and more: people struggling at home who just can’t cope.” Her cancer patient is the fifth like this in Pod B who will likely be admitted, with the potential for a long wait for a bed.

12:22 pm
After reviewing her latest case with McCauley, Achiam breaks for lunch in the back office. Mid-way through her homemade salad, an overhead page calls “Physician to Pod A.” She and McCauley jump up and run out of the room.

A 94-year-old woman has rapid atrial fibrillation and no clear time of onset. Her blood pressure is so low, they can’t give her medication to regulate her heart and she has a “do not resuscitate” order on her chart. With her usual charm, Achiam talks to the woman offering comfort and intravenous fluids to start. “She’s pretty sick,” she says later out of earshot. “She has a DNR, so I’m not sure how much more we can help.”

1:30 pm
Achiam heads down a hallway to special rooms for patients with mental health issues. A young girl with a history of bipolar disorder warms a bottle for her infant son. She has had thoughts of hurting herself and the baby – smothering him or throwing him across the room. “He’s a good baby,” she says through tears. “It’s scary.” Her psychiatrist has recommended hospitalization, something she’s coped with before.

Achiam commends the girl on coming in. “I’ll talk to the psychiatrist and see what we can do.” Outside the room, Achiam explains why she removed her stethoscope – the first time all day. “She was quite reasonable but you never know. People have been strangled before with items around their neck like name tags.”

1:55 pm
Achiam checks in on the 94-year-old woman in Pod A. After talking to McCauley she gives her antibiotics for pneumonia and a bit of medication to slow down her
heart rate. Achiam waits and watches for a few moments, then gets on the phone to admit her.

2:25 pm
“So where to next?” she says checking the computer, looking a little tired but still smiling. The bloodwork and CT scan is back for her cancer patient in Pod B. Achiam explains to him that there isn’t any evidence of bleeding in his brain, but she’s worried about some swelling and his risk of falling. “I don’t think it’s safe for him to go home.”

As she waits for the senior Medicine resident to return her page, the smell of a patient’s bowel movement permeates the air. A man groans repetitively in bed 7. Everywhere there are sleepy, sullen eyes just waiting. Among them is an 84-year-old woman who was seen by the night resident. After a long wait, her tests are finally back so Achiam sees her next.

She has non-specific inflammation in her lungs, though her condition isn’t serious. After nearly 12 hours in Emergency, she goes home with an appointment to see a respirologist. Achiam takes time to answer all her questions.

3:15 pm
She checks in on her liver cancer patient whose test results are back as well. “The good news is the bloodwork looks good. You’re doing a great job,” she reassures his son. She briefly goes over what he should discuss with the oncologist. “When I brought him in he looked like he was on his last breath,” the son says shaking his head.

3:30 pm
With a look of concern at her sleeping 94-year-old patient, she heads to Pod C to find McCauley for her evaluation. McCauley tells her the day with two people shadowing her has been good training.

“You’ve mastered the art of handling cases; the next challenge is having medical students on your tail.” Achiam’s done this before, but soon she’ll be in fourth year and teaching regularly.

According to Achiam, it’s been a slow day. “Some days, you can feel it in the air. It’s chaotic. Some days we have people in the hallway or see people in chairs in Triage.” The problems with the whole health system come out in the Emergency Department, she says. “You can’t get into a nursing home, you wind up here. People without a family doctor – they come to us.”

3:45 pm
The sun is still shining as Achiam heads out the door. She’ll grab a run, make some dinner, take Burton to puppy class and get her reading in for Thursday. Then she’ll return tomorrow to meet the unexpected again.
The diamond burs inside the eerie blue-lit machine systematically measure and carefully mark the damage they are about to inflict on a valuable nugget held on an upturned arm. Then the dance begins. With whirling water and lightning-fast movements, the two burs quickly go to work, transforming the white block into something truly magical for patient Maureen Connery-Bulford – the porcelain crown she needs to restore a cracked tooth.

The latest technology in restorative dentistry is being used in the Schulich dental clinic to create customized crowns at the patient’s bedside, improving a process that used to take two visits and two weeks to complete. Although Computer-Aided Design/Computer-Aided Manufacturing (CAD/CAM) technology has been used for years in industry, it has only recently come into regular use by practising dentists. Schulich Dentistry is the first undergraduate dental program in Canada to use the technology in training.

“The beauty of this system is that once you do the prep ... you can complete the full restoration in about 20 minutes,” says Dr. Gildo Santos, Assistant Professor in the Division of Prosthodontics (Restorative Dentistry). “Patients no longer have to wait two weeks to have this procedure done. It’s the way of the future.”

Santos uses a camera wand connected to the computer beside the patient’s chair to take images from inside her mouth, creating an optical impression. What used to involve a lengthy and uncomfortable process of taking a molded impression with wax or other dental compounds is replaced by a few clicks of the keyboard.

The computer uses the impression to create a 3-D model of the crown. Then Santos illustrates to his student how to read the impression and adjust the design of the crown on screen. He is able to identify contact and pressure points easily through the red highlighted areas on the 3-D image of Maureen’s new tooth.

Like a graphic artist, he carefully adjusts the custom design for the restoration. Satisfied with his masterpiece, Santos sends the data wirelessly to another machine just outside the cubicle. Ten minutes later, the crown is ready to be finessed and placed on the tooth.

Santos estimates there are only a handful of dentists in London currently using this technology, but says it is clearly the future trend in prosthodontics. The School currently owns three CAD/CAM systems – two are used in the clinic and one is used for research. Santos and colleague, Dr. Amin Rizkalla, received a grant in 2006 to explore the CAD/CAM system. After conducting research and faculty training on the system in 2006 and 2007, it entered clinical use with students in September 2008.
For over three decades transplantation has been one of London’s pinnacle examples of a world-class translational research program that integrates the work of basic scientists and clinicians in a common goal: saving lives.

Pioneering Miracles

BY KRIS DUNDAS
Photos by Shawn Simpson
Dr. Bill Wall (MD’70) vividly remembers the snowy day in 1978 he went to Toronto airport to collect the first vial of cyclosporine to arrive in Canada. It was the “magical white powder” transplant surgeons had been waiting for—a drug that could prevent the immune system from attacking a transplanted organ. Since then the London transplant program has never looked back.

The enormous research enterprise crossing multiple departments at Schulich, Lawson Health Research Institute and Robarts Research Institute has been the engine driving the clinical success, and continues to push the boundaries of transplantation. The Multi-Organ Transplant Program at London Health Sciences Centre (LHSC) has achieved dozens of firsts, including leading the first clinical trial in Canada on cyclosporine, the first liver transplant in Ontario, the first heart-lung transplant in Canada, the world’s first liver-bowel transplant, and the first living donor liver transplants in Canada. With two new Co-Directors in place, Dr. Patrick Luke and Dr. Anthony Jevnikar (BSc’76, MSc’77, MD’81), and an arsenal of top scientists and clinicians, the program is poised to build a brilliant future, inspired by the legacy of the past.

The Legacy
It all started in 1972 when University Hospital opened and it was determined transplantation would be a focus. At that time the results were dismal. Most died within months and few thought there was a future in transplantation. “We had people here of vision,” says Wall. “We had individuals like Calvin Stiller who knew someday organ transplantation would be widely applicable and have a high success rate.”

Dr. Stiller led the development of the transplant program in London and was Director until 1997. He also led the groundbreaking Canadian study on cyclosporine in kidney recipients. Cyclosporine proved to be a “quantum leap” in organ transplantation, pushing the success rate of kidney transplants to 80 per cent, and sparking a renewed interest in other transplants such as liver and heart.

“We got the drug before anyone else in Canada because of our connections with the group in Cambridge, England who were the first ones to prove its use both in the laboratory and the clinic,” explains Wall, who trained as a transplant surgeon in Cambridge in 1975 and 1976. “It was exciting to go from a miserable level of failure to a high level of success within several years. It was a wonderful experience to see these patients who were facing certain death from organ failure have their lives saved.”

A pioneer himself, Wall recently stepped down as Director of the Multi-Organ Transplant Program after 12 years at the helm. In January 2009 he was named to the Order of Canada for his contributions to liver transplantation and organ donation awareness.

The Research
Today, dozens of researchers advance transplantation from many angles. From basic molecular studies of the immune system, to microsurgery models of transplantation, to understanding the injuries to organs in the process of removal, storage and transportation, to clinical trials on immunosuppressive drugs—the research covers the full spectrum. “Every member of our current group and every new member as we
It was exciting to go from a miserable level of failure to a high level of success within several years. It was a wonderful experience to see these patients who were facing certain death from organ failure have their lives saved.

DR. BILL WALL

We have a mature program that has been doing studies on medications they will use less medication now to achieve transplant survival than 20 years ago. Another internationally renowned success story in transplant research is microsurgery, an area pioneered by the late Dr. Robert Zhong. “He developed the microsurgery laboratory here the technique for transplanting all organs and tissues in rodents and it provided an enormous platform for transplantation models in which we could study rejection, the effectiveness of immunosuppressants or the combination of immunosuppressants,” explains Wall.

The Future

With all of the program’s success, they are still unable to help everyone because of a shortage of donated organs. “The results have never been better than they are at the present time in transplantation,” says Wall. “But at the same time, the numbers of patients waiting for transplants has never been greater, the time of waiting has never been longer and the chance of dying while waiting has never been higher.”

Some of the solutions will come from the laboratory. Prevention of chronic disease is key; also designing better medications and finding ways to prevent organ injury. But there is also the promise of stem cells and regenerative medicine – repairing or remaking a failing organ. Madrenas says “Transplantation should be a step to fully regenerative medicine ... but this is a global initiative at very, very early stages.”

Not waiting on this futuristic solution, the team is working hard to improve the success rate and health of transplant recipients, and also expanding organ retrieval. London scientists and clinicians are national leaders in transplanting organs after cardiac death, a relatively new phenomenon. They are also continuing to advance living donor donations, particularly in liver and kidney transplants.

One of the milestones for the program will undoubtedly be the Matthew Mailing Centre for Translational Transplant Studies, a new 10,000 square-foot facility expected to open at LHSC in 2011. The centre will be close to the Multi-Organ Transplant Unit at University Hospital, which Luke says will be a huge advantage. “Five hundred feet from where patients are taken care of, we’ll be doing studies on medications they will receive in five years. It’s amazing.”

Jevnikar is also hoping the centre will help change some of the complacency he sees about the transplant program. “We have a mature program that has been excellent for so many years, sometimes we take that for granted,” says Jevnikar. “If you have a miracle every day, it can just become routine ... but they’re still miracles.”

Madrenas agrees. “Transplantation is unique (in London) because we have been putting resources into it. If we don’t continue to do that, we lose our competitive edge.”

For its part, Schulich Medicine & Dentistry is helping to support a new transplant scientist and surgeon, Dr. Alp Sener, through the Schulich Clinician Scientist Program, raising funds to establish an endowed research chair in memory of Dr. Zhong and plans to announce a unique translational immunology centre within the year.

SURGEON DR. PATRICK LUKE (LEFT) AND NEPHROLOGIST DR. ANTHONY JEVNIKAR WERE NAMED CO-DIRECTORS OF THE MULTI-ORGAN TRANSPLANT PROGRAM EARLIER THIS YEAR
David Hess (PhD’99) doesn’t hesitate when he’s asked what first sparked his interest in stem cell biology. “I’m a bone marrow transplant survivor. When I was 15, I was diagnosed with aplastic anemia.” He was told his only chance for survival was to have a transplant, and fortunately his brother was a match. Ever since then, he’s had an interest in cellular therapies, which he investigates now as a scientist at the Robarts Research Institute’s Krembil Centre for Stem Cell Biology.

Hess is also an Assistant Professor in Physiology & Pharmacology, the department where he achieved his PhD in 1999. He then joined one of Canada’s top stem cell researchers, Mick Bhatia at Robarts for postdoctoral training. “I spent three years with Mick and learned a lot about stem cell biology and became completely enthralled with it,” says Hess.

Hess left Robarts for the Washington University School of Medicine in St. Louis. “I felt I needed more training to basically find that needle in the haystack, to find those rare stem cells that could be involved in blood vessel formation … or used to induce beta-cell regeneration.” He returned to Robarts and Western in 2006.

Hess and his colleagues recently published a paper in the journal Blood, illustrating the successful regeneration of blood vessels in mice which have surgically-induced critical limb ischemia. Hess drew human bone marrow and isolated three different types of stem cells that coordinate together to form new blood vessels. The stem cells were purified and injected into immune-deficient mice. The research showed these stem cells have a natural ability to hone in on the area of ischemia to induce blood vessel repair and improve blood flow.

“Many people with long-term severe diabetes have very poor blood flow which causes resting pain and affects wound healing in their limbs, so much so that every year more than 100,000 people in North America will lose a limb,” explains Hess. “If we can use their own bone marrow stem cells to form new blood vessels, or to make blood vessels in their limbs more healthy and functional, we can perhaps stave off the need for those amputations.”

Aldagen, a biopharmaceutical company, is already conducting clinical trials using Hess’ data, and first results are very promising. The treated group of patients with critical limb ischemia showed improvements in overall clinical status as well as increased blood flow in the affected limb. Aldagen is also testing this therapy on patients with end-stage ischemic heart failure.

Hess admits, “I didn’t think it would happen as fast as it did, and I’m ecstatic that it’s working.” Twenty-two years ago, research saved David Hess’ life. Now he’s determined to pay it forward.
Improving Primary Care

If you’ve had a positive experience at your family doctor’s office lately, it just may be due in part to the work of Moira Stewart, PhD, and her colleagues. If you haven’t, rest assured they are working on it.

As Director of Schulich Medicine & Dentistry’s Centre for Studies in Family Medicine (CSFM), Stewart leads a multidisciplinary team that works daily towards improving primary health care. Stewart also holds the Dr. Brian W. Gilbert Canada Research Chair in Primary Health Care.

“Primary care represents the first point of contact of the patient to the health care system. It could be a visit to the family doctor, a pharmacist, a dietitian or various other practitioners,” explains Stewart, an epidemiologist who has studied primary care for more than 25 years. “About 80 per cent of health care takes place in that sector.”

One of the main foci for the centre is patient-centred care. “The patient-centred clinical method has been one of (the Department of Family Medicine’s) planks for a long time. It’s what we are known for internationally.”

Stewart’s current research is proving the value of the patient-centred model. “We now know the important outcomes – greater patient satisfaction, the patient’s health gets better and it’s more efficient for the system … If you are thinking of a sustainable health care system and a desire to be wise stewards of health care dollars, this is clearly one of the solutions.”

The other big research area is electronic medical records. The Centre has developed a unique database with records from across Southwestern Ontario that has already delivered valuable data on patient encounters, wait times, and diabetes care.

“We always have a commitment to make sure the results get into practice and the hands of policy makers who can make decisions in the best interest of the public,” says Stewart, who regularly meets with family doctors and Ministry of Health and Long-Term Care officials. Though she is quick to credit the CSFM team, Stewart’s leadership has not gone unnoticed. In June, she delivered a keynote address at the Asia-Pacific meeting of the world organization for family medicine practitioners and she was named Canada’s Family Medicine Researcher of the Year in 2007.”

As for the future, Stewart says the big opportunity is to transform patient-centred care to be the “cornerstone” of the interdisciplinary health team. “As you might guess, I’ve got a team working on that.” She also sees a much wider use of electronic medical records on the horizon. “I could imagine a provincial primary care database. Someday it may happen, and it may happen here. You don’t get the big results if you don’t have a big vision.”
Dr. Jane Philpott (MD’84) calls it her big dream. “That every Canadian would know on World AIDS Day, they’re working on behalf of people with HIV. Once we have every Canadian on board, we’ll try to get the rest of the world to join us.”

Changing the World One Day at a Time

It’s a simple dream to the family physician and mother of four, and one that belies her passionate fight to win over the minds, hearts and wallets of colleagues to those suffering each day with HIV and AIDS – particularly in Africa.

In 2004, Philpott started Give a Day to World AIDS, which has raised more than $2 million for the Stephen Lewis Foundation and Dignitas International. It began as a challenge to her physician colleagues at Markham-Stouffville Hospital to add up their billings on that day and donate an equal amount. Within two weeks, she had raised $33,000.

Philpott knew her idea could take flight to other hospitals and other professions – and it has. The medical, legal and business communities in Toronto, as well as schools and other groups across Canada have supported the annual campaign, helping to raise more than $500,000 in 2008.

“It’s amazing that she has taken this creative idea and transformed it into a miraculous intervention in the lives of people who are struggling for survival,” said Stephen Lewis in a recent video tribute to Dr. Philpott, upon her receiving the 2009 Casey Award from Casey House, a Toronto HIV and AIDS hospice.

The award recognizes a leader in HIV/AIDS and social advocacy – a role Philpott welcomes. “It’s nice to have a platform to say ‘Yes, there has been great progress made in terms of more and more people on antiretrovirals, but still at least 6,000 people die every day from AIDS and it’s ridiculous there is so much injustice.’”

It is that sense of injustice, particularly for children, that drives Philpott. It is also a tribute to her first-born daughter, Emily, who died of meningitis in Niger, Africa in 1991 at age two.

Philpott and her husband, Pep, spent more than 10 years working at a hospital in the small West African country. For others, a tragedy like this might have led them to close the door on Africa for good. For Philpott, it galvanized her will to end the injustices she saw every day for African mothers and their children.

“It was a horror – a parent’s worst nightmare,” says Philpott. “But, if anything, it solidified my commitment to do something about global health because so many of the issues have an impact on young children dying of preventable diseases.”
Changing the World
One Day at a Time

DR. JANE PHILPOTT
ALUMNI PROFILE
Emily’s meningitis was a form that is not always preventable but is much more common in Niger than in North America. Her second daughter, Bethany, was also infected, but was saved; in part due to an emergency evacuation.

“The first day, my husband and I remember our first instinct was ‘get me out of this place and I never want to come back,’” says Philpott. They had to come back to Toronto for Bethany’s treatment and recovery. “But we very quickly – literally the next day – said ‘We have to go back. We have to bring good out of this by helping to prevent other children from dying.’”

Eventually the family returned to Canada but 18 years later, Philpott’s vision remains. She exudes motherly compassion as she talks about the more than 1,000 babies being infected in utero every day with HIV – something that is completely preventable through early detection and access to the right medication.

Despite Give a Day’s success, Philpott remains frustrated HIV and AIDS have fallen out of media attention. “The economic realities have become our global dialogue now and not addressing health and development issues. Meanwhile these chronic, desperate issues like AIDS, poverty, tuberculosis … it’s really hard to maintain public interest to make a difference.”

Her activism is inspiring for medical students with their own passion for global health. In May, she returned to Western for the second time to discuss global health with Schulich students. As a fourth-year student at Western, Philpott did an international elective in Kenya – a decision she says had the biggest influence on her career.

In 2010, Philpott will launch a Family Medicine residency program for the University of Toronto at Markham-Stouffville Hospital with a focus on global health. Trainees will complete requirements for Family Medicine residency while also obtaining a Certificate in Global Health through the University of Toronto’s Global Health Education Institute.

How does she balance a family practice with more than 1,000 patients with being an academic, a global health activist, and a mother of three teens and an eight-year-old? “It means from the time I wake up in the morning until I go to bed at night I’m doing one of those jobs,” says Philpott, laughing that she only actually gets paid for one of them. “I love what I do. I am really driven by my commitment to global health issues.”

Hundreds of volunteers have stepped forward to help with Give a Day, which has lent the campaign a life of its own, but Philpott remains determined to capture more individuals. “It has caught on wonderfully but in some ways I get frustrated it hasn’t caught on more. I really believe even though we’re in an economic crisis, the money is there to address the health needs – to give everyone a basic level of health that everyone in the world has a right to enjoy.”

Do organizations like those Give a Day supports make a difference? You bet. In 2004 when Give a Day started there were 400,000 people in the world on antiretroviral medication. Now there are almost 4 million – nearly a ten-fold increase. But with 33 million people currently living with HIV, Philpott says there is a long way to go.

At the same time she is optimistic. “I think there is a paradigm shift in terms of people’s understanding of their role in the world and their responsibility to address the inequities they see. When I think of the realities of what HIV does, I think, ‘One day per year? Could we not even give a portion of one day per year on behalf of people who live with HIV every day?’… I think we can.”

Schulich students ‘Give a Day’

Schulich medical students launched their first Give a Day campaign in December 2008 by raising awareness about HIV, studying about AIDS, volunteering and making donations. Students and others were invited to contribute thoughts, ideas and knowledge on HIV/AIDS to an eight-foot-high red ribbon display. Here are a few contributions:

“This is NOT a hopeless situation.”

“Every 14 seconds, a child is orphaned by AIDS.”

“It’s unacceptable for anyone to die of a treatable disease without getting the care that can save them.”

“Every day AIDS kills 6,000 people and another 8,200 are infected with the deadly virus.”
Dr. Mehmet Danis (DDS’05) still gets choked up when he talks about the heartbreaking stories his wife, a dietitian, brought home after working with low-income breastfeeding moms. “I was shocked that these stories were from Canada,” recalls Captain Danis, a Canadian Forces dentist stationed in Toronto. “And I was embarrassed by the fact that I didn’t know this, and by the fact it was happening to begin with.”

The experience got Danis thinking. While he wanted to help, writing a cheque didn’t provide anywhere near the kind of satisfaction his spouse derived from her labours. Could he do something similarly fulfilling, that would also give back to the community? Maybe he could convince others to follow his example, creating a snowball effect. Giving might even prove so addictive that one day, western society would measure success not by money or material goods, but by how much we help others.

Unreasonable goals? Perhaps. So it was only fitting that Danis find an unreasonable way of trying to achieve them. Through a chance conversation a few years ago he learned about adventure races – gruelling seven-day, 250-km treks across the desert. “I thought, that’s impossible. You can’t run across a desert,” he says. Nonetheless, he decided to see if he could jog half the 40 km endurance racers cover per day. While he had to walk the final 5 km, he completed 20 km. Maybe, with seven months left to train, he could finish the 2007 Gobi March.

So Danis forked over the fee and reserved a spot, as did his close friend and former classmate, Dr. Ashkan Mokhtari (DDS’05). Danis placed sixth in a field of 185. Having torn a calf muscle during training, Mokhtari walked every last hot, dusty step. What’s more, the dental duo raised $4,500 for United Way and attracted a fair amount of media attention.

Now in shape, Danis wasn’t about to quit. In April 2009, he and Mokhtari ran across Chile’s Atacama Desert against 83 competitors, including several professional ultra-marathoners. This time, Danis won, bringing in $6,500 for charity. (Mokhtari came 23rd). Not wasting any time basking in his victory, Danis plans to run the Sahara Race in Egypt in October, and another in Australia next year.

When he crossed the finish line he urged his competitors: “Don’t forget, when you had peanuts and one set of underwear left, you were probably way happier than you were with your cars and your plasma TV. Spread that message and maybe we can create a culture where we can spend less, and be happy more.”

... a gruelling seven-day, 250-km trek across the desert. I thought, that’s impossible. You can’t run across a desert.
Half a world away from his Thunder Bay plastic surgery practice, Dr. Mark Thibert (BSc’79, MD’83) has made a difference in the lives of many ordinary Afghan citizens that goes much deeper than the merely cosmetic. Between July 27 and October 3, 2008, Dr. Thibert, a reservist and commanding officer of 18 Field Ambulance, was deployed to the Role 3 Multinational Medical Unit (MMU) at Kandahar air field – a period when the institution saw an unprecedented peak in casualties. Countless residents of the country suffer horrifying injuries from insurgent attacks, and end up at the Canadian-military-run MMU.

“If a Canadian is badly wounded, they’ll get their life-saving surgery (at the MMU) and then they’ll get reconstructive surgery back in Canada, but for many, many severely wounded and disfigured Afghan citizens, Dr. Thibert was the only chance at surgery,” explains Dr. Andrew Kirkpatrick, a Calgary general surgeon who served alongside Thibert for a month. To illustrate, Kirkpatrick tells this story. “There was a guy who basically had half his leg blown off by a high-powered machine gun bullet, and the orthopaedic surgeon had fixed the bone, but there was no vascular surgeon,” he says. “Mark helped me with the easy end of the interposition graft, and he did the hard end, and it worked perfectly. That gentleman would have lost his leg if it wasn’t for Mark.”

According to Thibert, injured individuals in Afghanistan can be abandoned by family if they’re unable to return to work soon after release from hospital. He also says it was particularly gratifying when he was able to restore someone’s hand function because the hands play such an important role in communication in that culture.

Thibert remained upbeat and encouraging, says Kirkpatrick, even after more than 24 straight hours doing facial reconstructions, helping with wound debridements, and putting skin grafts on fasciotomies – something that made him stand out even in an environment where interdisciplinary respect and pitching in is the norm. All this, despite dorm-like living conditions, 24/7 on-call, temporarily having to forgo passions like running and playing jazz, and missing friends and family, including his two adult children.

For his part, Thibert says he gained a great deal of satisfaction from the experience and learned at least as much from his colleagues as they did from him. “If I had to pick out one thing from my entire deployment that was most meaningful to me, it was the ability to work so very closely with all of these very, very highly trained individuals.”

Thibert is also quick to shift some of the credit for his good works in Afghanistan onto other shoulders.

“For many, many severely wounded and disfigured Afghan citizens, Dr. Thibert was the only chance at surgery.
Teaching Excellence

“...smile,” says Ewa Cairns (PhD ’87) emphatically when we ask to take her photo. But ironically, her smile lights up the room when it comes to talking about graduate students.

“I just love teaching graduate students,” beams the veteran Professor of Medicine and Microbiology & Immunology. “There is constant challenge for me intellectually to keep up with them and to keep them going as well.”

Cairns did her PhD with Schulich Professor Emeritus Dr. David Bell, who remains an ongoing research collaborator today. Cairns herself has trained Masters and PhD candidates, as well as residents and fellows for more than 20 years. Her research is focused on the pathogenesis of rheumatoid arthritis. “I had great role models and I always wanted to do that – to be one myself in the future,” she says.

In 2008, Cairns was recognized with a Schulich Award for Excellence in Education. In fact, for many students – even those outside her own lab – she is one of the most influential faculty members. And her thorough review and editing of theses is legendary. “I am actually very picky,” Cairns laughs, estimating she spends about 40 hours reviewing a single thesis. “I am probably the designated person that if students want to have a thesis that is almost perfect for submission, they usually come to me.”

It’s that attention to detail that students are often most grateful for. In his letter of support for Cairns’ award, former PhD student Jonathan Hill said, “I’ve always admired Dr. Cairns for her detail to technical precision in science ... This attention to precision did not come at the expense of creative exploration however, and providing her students and postdocs with this balance has generated an exciting and productive environment for research.”

Another former Microbiology & Immunology graduate student, Jennifer Trowbridge, said Cairns’ enthusiasm also sparked a lot of interaction and discussion. Recalling classes with Cairns during a first-year immunology course, Trowbridge said, “It was the only time during that course that the hours seemed to fly by, and no one seemed to mind if we went on past the scheduled class time.”

Cairns is also an important role model, particularly for women in science, but says it hasn’t always been easy in a male-dominated field. “I work extremely hard, very long hours ... but that’s another lesson. In science not all jobs are permanent. It’s a risky business, especially for women who have families. They have to spend a lot of time building their research career.” But she adds, “I don’t know what I would do otherwise. You have intellectual freedom in academia to follow the ideas you want to.”

Her passion for science and teaching is a great lesson on its own for students. She admits, “I do smile but not all the time. I try to show that I am happy with what I am doing ... And if you’re happy, people see that it’s a great job and they take that lesson from you.”
Injecting Dollars into Diabetes Research

Diabetes research at Schulich Medicine & Dentistry received a huge boost from several Canadian pharmaceutical companies this year.

Starting with Pfizer Canada Inc. in December 2008, Novo Nordisk Canada Inc., Sanofi-aventis Canada Inc., Merck Frosst Canada Ltd., Eli Lilly Canada Inc., and, most recently, GlaxoSmithKline Inc. each made contributions, adding a total of $1.96 million to the National Diabetes Management Strategy, a research partnership between Western and the Canadian Diabetes Association (CDA).

The CDA Chair in Diabetes Management is a cornerstone of the National Diabetes Management Strategy. Dr. Stewart Harris holds the chair as well as the Ian McWhinney Chair in Family Medicine Studies at Schulich. It is Dr. Harris’s responsibility to provide leadership for the strategy. An Advisory Council, who provides input and feedback on the research program, had their inaugural meeting in June.

Harris’s research focuses on the use and application of clinical practice guidelines for family doctors in the management of diabetes, and the prevalence and treatment of type 2 diabetes in First Nations and other special populations.

“Today, diabetes takes an enormous toll around the world, in terms of personal health and in the financial burden it places on our health care system,” says Harris, whose research has shown that half of Canadians with diabetes are not properly controlling their disease.

“Projections show we can expect dramatic increases in the future,” he adds. “These contributions recognize the importance of investing in research to help better identify and close the gap in diabetes and health care delivery.”

The chair and strategy were established to develop and evaluate evidence-based models of optimal diabetes management, and to advance prevention and treatment of diabetes, with the ultimate goal of improving the lives of about two million Canadians diagnosed with the disease, and millions of others at risk. It will also help reduce the estimated $13 billion in health care costs spent on diabetes care annually in Canada. The support for the chair continues to grow towards its $5-million goal.
FUNDRAISING HIGHLIGHTS

MORE THAN $7 MILLION WAS RAISED IN SUPPORT OF RESEARCH AND EDUCATION AT SCHULICH MEDICINE & DENTISTRY IN 2008/09. HIGHLIGHTS INCLUDE:

- Wyeth Pharmaceuticals contributed $1.1 million to establish the Wyeth/Canadian Institutes of Health Research (CIHR) Clinical Research Chair in Transplantation. Held by Dr. Anthony Jevnikar, the Chair will fund research to improve the outcomes of organ transplants.

- A total of $1.2 million was raised through planned gifts from friends and alumni. Planned gifts, in the form of bequests, securities, life insurance and other allocations, allow Western to support future generations of Schulich students and researchers.

- Richard Ivey showed his support for surgical excellence at Schulich by contributing a further $100,000 to the Richard Ivey Chair in Surgery, currently held by Dr. John Denstedt.

- A new endowment fund was established by orthodontic alumni in recognition of Dr. Antonios Mamandras, long-time Chair of the program. The fund will support research and education in Schulich Dentistry’s Master of Clinical Dentistry program in Orthodontics. To date, the fund has raised more than $85,000.

Thank you to all donors and friends for your support this past year.

Future Funding Priorities

In addition to our ongoing commitment to student financial assistance and faculty support, we have identified the following priorities for the coming year:

- Capital and Space Planning
- Surgical Training
- Support for Graduate Studies in Medical Science
- Centre for Education Research and Innovation
- Centre for Human and Translational Immunology

For more information on fundraising, contact: Gillian Sneddon, Director of Development at 519-661-2111 ext. 82247, or gillian.sneddon@schulich.uwo.ca
The UWO Medical Journal

“Its main value is in teaching the students how to write scientifically and prepare footnotes and references, but it also has that sense of continuity that documents the life of the medical school.”

Dr. Paul Potter

A hidden gem was nearly lost in 2005 when The University of Western Ontario Medical Journal hit a seemingly insurmountable hurdle. The 75-year-old student-run publication had a printing company that literally disappeared, zero funding sources and limited volunteers.

What it did have on its side was a determined group of students that found a way to keep the fire alive. Now approaching its 80th anniversary, the UWO Medical Journal is the second-oldest of its kind in Canada, beat only by the University of Toronto Medical Journal started in 1923.

“When I came in first year, I found an old copy of the Obstetrics & Gynecology issue,” says Wendy Ng (MD’09), former co-editor. “It was so neat to hold a publication in print made by students. It was so professional. I really wanted to be part of that and I thought how sad it would be if it was lost – especially given its long history.”

Over the years, the Journal has been many things: a scientific exploration of issues of the day, a testimony to the development of medical science, and a glimpse into the everyday life at Western’s medical school. Yes, along with the scholarly articles there are tales about “Tachy,” results of the meds football season, photos and even wedding announcements. The archived journals dating back to 1930 are rich with the history and excitement of medicine at Western – the voices from the dusty pages whisper like ghosts of the past.

Inspired by this tradition, Ng and her colleagues put together a business model to sustain the publication long into the future. With the focus now clearly on scholarly publication, they instituted a new review process and faculty review board. Working with an external advertising firm, they easily raised the finances needed, and reduced costs by doing the layout themselves. They increased the number of printed copies to 800 and now produce two 60-page issues per year, and an online-only summer edition. The tradition of including original cover art by a student, begun in the 1980s, also continues.

Dr. Paul Potter, Chair of the History of Medicine Department says there have been several periods where the journal has struggled but its survival lends a “living connection” to our past. “Its main value is in teaching the students how to write scientifically and prepare footnotes and references, but it also has that sense of continuity that documents the life of the medical school.”

As Ng celebrates her recent convocation, she feels confident about the future of the Journal. “There is a fantastic new executive team taking over. I know the Journal is in very good hands for years to come.”

FOR MORE INFORMATION VISIT www.uwomeds.com/uwomj
ALUMNI VOLUNTEERS, DONATIONS OR SUGGESTIONS ARE WELCOME BY EMAILING uwomj@meds.uwo.ca
In 10 Years...

66% Increase in Medical class size since 1999 - from 96 to 159 students

194 Growth in MSc and PhD enrolment since 1999 - from 283 to 477

73% Increase in research funding since 1999 - from $74 million to $128 million

140,996 Square feet of new space

44% Increase in number of faculty since 1999 - from 1,239 to 1,784

23 Number of endowed chairs

23 Canada Research Chairs named

$117 million Donated in support of Schulich research and education

45,000 Individual patients cared for at Schulich dental clinics

$7 million In scholarships and bursaries now available annually

STUDENT ENROLMENT 2008-09

Doctor of Medicine (MD) - 567
Doctor of Dental Surgery (DDS) - 221
Bachelor of Medical Sciences (BMSc) - 701

For September 2009:
MD 2,263 (spaces available: 159)
DDS 574 (spaces available: 55)
Who says HIV/AIDS can’t be stopped?

Researchers at Western’s Schulich School of Medicine & Dentistry are one step closer to defeating HIV/AIDS. Their work has created a promising vaccine that may not only prevent HIV infection, but also deliver a cure for the tens of millions of people around the globe who are infected with the deadly virus.