

Schulich School of Medicine & Dentistry

Rapport

Issue Two
Summer 2007

The University of Western Ontario



Ecosystem Health

Exploring the connection between
human and environmental health

HEALTH SECTOR MBA • SERVICE ABOVE SELF • INTERGENERATIONAL GALA

SHAPING THE FUTURE OF HEALTH CARE

Mission

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

Rapport

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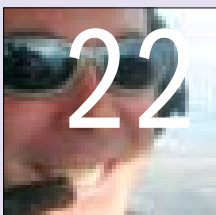
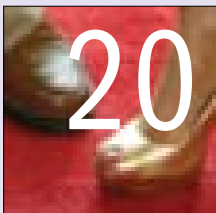
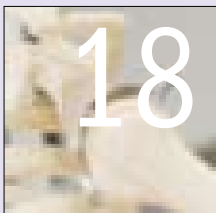
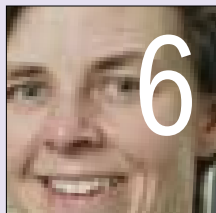
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On the cover:

A Scott-tent work station on ice – Lake Vanda, Antarctica. *Read about Schulich Medicine & Dentistry's ecosystem health initiatives on page 10.*



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“Change drives us forward and creates a momentum that keeps Schulich Medicine & Dentistry on the forefront of education and research. From this position our students, faculty and staff are fully able to shape the future of health care.”



Photo credit: Shawn Simpson

CHANGE IS A POSITIVE FORCE

The adage, change is the only constant, resonates throughout the Schulich School of Medicine & Dentistry. While recognizing the challenges change presents, especially on a day-to-day basis, I firmly believe that it is a positive force within our School. Change drives us forward and creates a momentum that keeps Schulich Medicine & Dentistry on the forefront of education and research. From this position our students, faculty and staff are fully able to shape the future of health care.

Change is apparent in our ongoing efforts to establish an undergraduate medicine program in Windsor as well as the integration of Robarts Research Institute into our School. These initiatives are stretching our thinking and processes but will ultimately enhance our capacity. You can read about both of these projects on the next two pages.

The benefits of change can be seen throughout the stories in this issue of *Rapport*. A new area of study, ecosystem health, is helping students and researchers understand the link between human health and the environment. Through the Intergenerational Gala our students are shifting their own perceptions about seniors,

a growing population they will work with a great deal as future health care providers.

In the lab, translational breast cancer research is bridging the gap between researchers and physicians to improve patient outcomes while professors in Schulich Dentistry have embraced a team-based approach to tackle hard questions about bones and teeth.

While the stories in this magazine speak to change, one thing remains the same: our commitment to building relationships and dialogue with you – our alumni, partners and friends. As Schulich Medicine & Dentistry evolves, we greatly appreciate the support and guidance you provide.

Sincerely,

Dr. Carol P. Herbert
Dean

Schulich Medicine & Dentistry Check-Up

Recent news and announcements from the School



Photo credit: WHO/Jean-Marc Ferre

Schulich Medicine alumna elected to top UN health post

Dr. Margaret Chan (MD'77) was elected Director-General of the World Health Organization in November 2006.

Chan, who was profiled in the inaugural issue of *Rapport* last year, was nominated by the government of China. She worked for 26 years with the Hong Kong government before joining WHO in 2003 as Assistant Director General of Communicable Disease and the Director-General's Representative for Pandemic Influenza.

"Dr. Chan is a perfect choice. We have followed her career and accomplishments with tremendous pride," says Carol Herbert, Dean of the Schulich School of Medicine & Dentistry.

"This is one of the top medical posts in the world, and we're confident the training she received here, along with her extensive public health experience, will help guide all of us through future health crises, even a pandemic."

Windsor update

Preparations for the opening of the Schulich School of Medicine & Dentistry – Windsor Program in September 2008 are well underway.

Tom Scott, PhD, has been appointed Associate Dean – Windsor Program at Schulich Medicine & Dentistry and Director, Medical Studies at the University of Windsor. Most recently an independent consultant in medical education and Honorary Research Professor in the Faculty of Medicine at Memorial University, Scott was involved with the development of the proposal for the Northern Ontario School of Medicine and spent a year as the School's acting Campus Dean East. He will provide academic leadership for the Windsor Program.

The University of Windsor is also constructing a new building on its campus next to the existing Anthony P. Toldo Health Education & Learning Centre. Schulich Medicine & Dentistry – Windsor Program will occupy the first two floors of this new building.

"We are moving ever closer to realizing the Windsor Program and our goal of delivering a community-oriented, collaborative, interprofessional and patient-centred medical education program in Windsor," says Carol Herbert, Dean of Schulich Medicine & Dentistry.



An architectural rendering of the inside of the new building the Windsor Program will occupy on the University of Windsor campus.



Photo credit: Richard Bain

Robarts joins Western family

Effective July 1, 2007, The University of Western Ontario will welcome Robarts Research Institute into its community. Internationally renowned for its pioneering discoveries in medical research, Robarts – which is already located on Western's campus – will remain a distinct research entity within Schulich Medicine & Dentistry.

Since Robarts' founding in 1986, its scientists have been investigating new ways to better understand, treat and prevent disease. Commercialization success over the years has included more than 80 patents filed, 15 licensing agreements and eight spin-off companies, raising more than \$80 million in investment capital.

In recent years, however, Robarts has fallen victim to its own success, receiving record numbers of grants for research programs while lacking the operating funding required to support those programs.

"The Institute is experiencing tremendous growth but is unable to keep up with itself," says Schulich Medicine & Dentistry Dean, Carol Herbert. "It's not just about financial stabilization but about growth, and by entering into a relationship we can enhance growth."

Ted Garrard, Vice-President (External) at Western, says the merger will reinforce London's reputation as a major research centre.

"We see this as an opportunity to strengthen the research possibilities at both Robarts and Western and build on the strong linkage that already exists," he says, adding it would offer better access to leading researchers for Western graduate students.

The Ontario government has endorsed the integration, investing \$23 million to assist in attracting top research talent and help fund state-of-the-art medical research equipment.

"Our integration with Western is an important step in ensuring a bright future for Robarts' world-renowned science," says Dr. Cecil Rorabeck, Interim Scientific Director at the Institute. "Since announcing the merger, we have already received more than \$16 million in research grants – far exceeding the national average – and that success tells me how highly the research community values Robarts as a centre for medical excellence."

Boost for Schulich Dentistry

The Ontario government announced \$1.2 million in annual funding for Schulich Dentistry in May.

The new financial support – which is already in effect – is part of a province-wide funding package for clinical education. Both of Ontario's dental schools received money from the deal based on relative student population.

While Schulich Dentistry is still determining the final allocation of its new resources, it is considering hiring additional educators and staff, implementing an upgraded patient management system, developing resources to improve the consistency and quality of instructor feedback to students as well as infrastructure enhancements.

"We are very grateful to MPPs Chris Bentley, Minister of Training, Colleges and Universities; Deb Matthews; Khalil Ramal; John Wilkinson and Dr. Kuldip Kular," says Dr. Harinder Sandhu, Associate Dean and Director, Schulich Dentistry. "They recognized the important role our clinics play in training the next generation of dental professionals and providing affordable dental care to the community and carried this message convincingly to the Premier, Cabinet and Legislature."



Chris Bentley watches Ramez Salti (DDS'07) drill teeth to demonstrate how dental students use simulators to practice their skills before moving onto real patients. Photo credit: Paul Mayne



Combining business and medicine: Dr. Fawaz Siddiqi and Dr. Kellie Leitch. *Photo credit: Shawn Simpson*

The Business of Medicine

by Ericka Barrett Greenham

If you told Dr. Fawaz Siddiqi (MD'03) four years ago he would be back in school before even completing his residency, he would have said you were “nuts.”

Now, having almost finished the Health Sector MBA program offered by the Richard Ivey School of Business and the Schulich School of Medicine & Dentistry, the neurosurgical resident at the London Health Sciences Centre in London, Ont. is more than happy with his decision to return to the classroom.

“ More than 10 per cent of Canada’s GDP is invested in health care. We need leaders who know the nuances and complexities of the system and have the scientific, managerial and entrepreneurial skills to help shape the future of health care.”

“My choice was justified within the first week,” says Siddiqi. “Interacting with colleagues from other professions – some health care related and some not – expanded my perspective and fundamentally changed how I think about health care delivery.”

Siddiqi was one of 15 students enrolled in the Health Sector MBA program which was offered for the first time in the 2006/07 academic year. A young health care professional, he is a member of the program’s primary target audience, which also includes life sciences post-docs, nurses, dentists and allied health care providers.

“We recognize that young health care professionals need a dual skill set. They require clinical and technical skills as well as leadership and managerial skills if they are to drive change,” says Dr. Kellie Leitch, co-director of the Health Sector MBA and Assistant Dean (External), Schulich Medicine & Dentistry.

“In Canada the universal health system is valued but faces financial, demographic and technological pressures. Governments have to make choices. Ideally, health care providers will be part of the decision-making process because they have an understanding of their patients’ needs and how the system works.”

A 12-month program, the Health Sector MBA is fully integrated with Ivey’s regular MBA for the first three modules. Students learn the essentials of business management in addition to best practices from other industries.

The final module of the program is comprised of six health sector-focused courses. These specially designed courses cover topics related to clinical trials; statistics and pharmacoeconomics; intellectual property and licensing; managing health sector politics and environment; financing private health sector enterprises; and health sector marketing, strategy, management and accountability. In addition, students complete a project that involves answering a real strategic question for a health sector firm.

Unique internationally, the Health Sector MBA program is the only true partnership between a business school and a medical school.

“Ivey and Schulich Medicine & Dentistry worked together to develop the program and faculty from both schools teach in it,” says Leitch, who is also the Chair of Paediatric Surgery at the Children’s Hospital of Western Ontario. “We each provide something very valuable to students. The whole program is based on Ivey’s highly regarded case study method while Schulich Medicine & Dentistry offers clinical and research resources.”

For Dr. Jesse Shantz (MD’05), the fact he can do the Health Sector MBA concurrently with Schulich Medicine’s Clinical Investigator Program is a big selling point. The Clinical Investigators Program, also new in 2006/07, allows an intense research experience in the middle of a residency training program.

Shantz, who will begin both programs in September, is interested in process and how hospitals work as organizations. Specifically, he wants to know more about informatics.

“Hospitals are starting to use computers more and more but it’s a slow process. The business sector is way ahead so there is a lot we can learn from it,” says the second-year University of Manitoba orthopaedic surgery resident.

Shantz plans to apply what he is learning in the Health Sector MBA to his research.

“I’m going to examine how medical research can be facilitated through the use of electronic patient records. There is a relationship between this type of work and direct marketing. Hopefully, a business perspective will provide innovation in medicine.”

With more people like Shantz looking for tools to better administer the health care system, the future of the Health Sector MBA program appears strong. Enrolment for the fall is expected to be 25.

“More than 10 per cent of Canada’s GDP is invested in health care,” says Leitch. “We need leaders who know the nuances and complexities of the system and have the scientific, managerial and entrepreneurial skills to help shape the future of health care.”

Shaping the future of health care is exactly what is on the minds of Siddiqi and Shantz.

“I plan to practice neurosurgery but also get involved in health care administration,” says Siddiqi. “I want to be on the front line designing and implementing improved delivery systems or developing strategy from a governance and policy standpoint.”

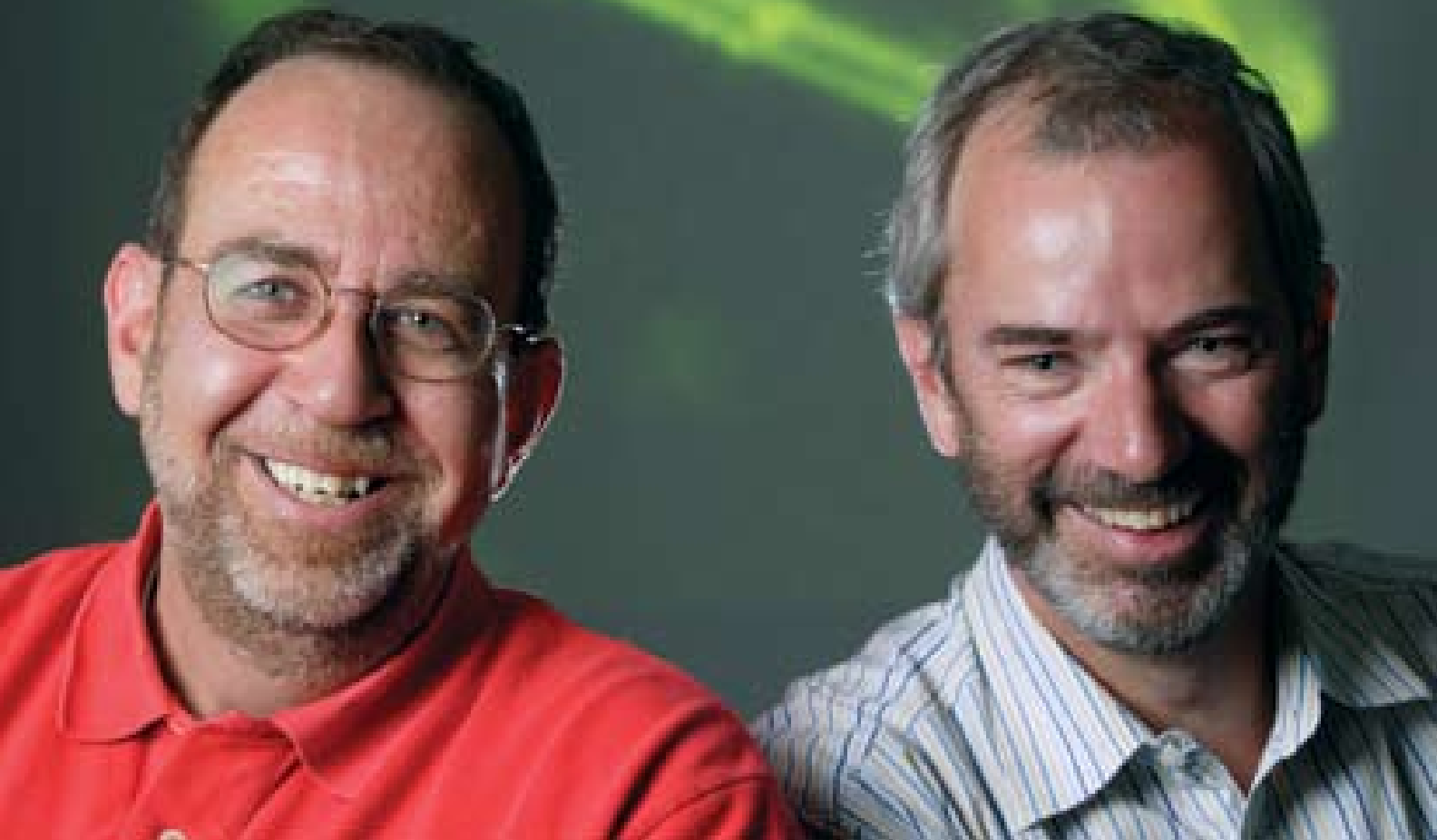
As it stands now for Shantz, his priority will likely be research and teaching.

“I’d like to run a research lab and participate in the education of future physicians.”



Crystal Clear Vision

by Kathy Wallis



Holistic practitioners believe in the healing powers of crystals like amethyst and rose quartz. Harvey Goldberg, PhD, and Graeme Hunter, PhD, also believe crystals hold the key to healing but they are referring to biological crystals, essential building blocks for strong teeth and bones.

“Mineralized tissues like bones and teeth have physical properties that are critical for their function,” says Hunter. “Obviously, the skeleton has to be rigid enough to support the weight of the body and in the oral cavity the teeth have to be very hard to crush food. In order for mineralized tissue like bone or teeth to function properly, it has to have the right ratio of crystals to soft tissue and it has to have the right architecture at the microscopic level.”

Hunter is trying to explain things like why the crystals in tooth enamel are large, long and thin, whereas in dentin and bone, the crystals are very small and irregular in shape. Crystal size, shape, orientation and location are all factors in biomineralization.

But not only do Hunter and Goldberg want to fully understand biomineralization, they want to be able to switch the process off and on; “off” to prevent mineralization where it should not occur such as in the kidneys with kidney stones or in blood vessels with atherosclerosis, and “on” to regenerate new bone to replace tissue lost to disease or injury, and to speed healing for the integration of dental and orthopaedic implants into bone.

“In order for mineralized tissue like bone or teeth to function properly, it has to have the right ratio of crystals to soft tissue and it has to have the right architecture at the microscopic level.”

The two biochemists are professors of oral biology at Schulich Dentistry. They are also members of the Canadian Institutes of Health Research (CIHR) Group in Skeletal Development and Remodeling, a multidisciplinary group of scientists at the Schulich School of Medicine & Dentistry pooling their knowledge and resources to tackle musculoskeletal disorders.

“One of the things I’ve learned is that one person can only do so much, but if you work in a team you can attack a problem from a number of different angles,” says Goldberg.

Hunter and Goldberg seem like a perfect match in more ways than just their scientific interests. They each possess a dry sense of humour, joking that it was desperation that brought them together. But after 16 years of collaborating, Goldberg says “what has worked so well in our collaboration is that we have used our respective strengths, Graeme’s expertise on mineralization and protein interactions with these crystals, and my expertise on the structure and function of bone proteins, to develop our successful program on biomineralization.” In 1993, the two scientists drew wide recognition for two published papers on how one protein can start mineralization and how another can inhibit it.

“It’s a very complex relationship between the normal mineralization of bone and the pathological mineralization of tissue like in blood vessels and kidneys, which we don’t really understand yet,” says Hunter. “It turns out that some of the same proteins that are present in bone are also present in pathological forms of mineralization such as kidney stones and atherosclerotic plaque.”

The two identified osteopontin (OPN) as a potent inhibitor of the kind of crystal formation that results in kidney stones. In the long term, they hope their investigations of OPN will result in a new treatment to prevent kidney stone disease. Hunter says it has tremendous potential because even with current lithotripsy treatment to remove kidney stones, there is a good probability they will recur. The knowledge could also be applied to a wide spectrum of human diseases involving pathological calcification, including dental calculus, gallstones, and atherosclerosis.

While Hunter’s lab primarily directs its attention to turning off biomineralization, Goldberg’s wants to find ways to boost it. The ability to stimulate bone to repair itself could help in complex fractures, bone replacement and spinal fusions. It may even eliminate the need for bone grafts or artificial bone substitutes, commonly used now to anchor teeth or implants in cases of severe periodontal disease. Goldberg has shown that bone sialoprotein (BSP) can initiate bone formation by inducing cells to become bone-forming cells. BSP can also initiate mineral formation in a scaffold that may be used as an implant material to provide structural integrity to a bone defect and thus allow normal healing to occur.

Goldberg and Hunter have received funding from CIHR to work on the development and testing of novel specific peptides to stimulate bone regeneration. If successful, it could lead to a new commercial product, an orthobiologic to help those with skeletal and dental problems.

Bare Bones

- 2000-2010 is the Bone and Joint Decade
- The initiative is supported by the UN and WHO
- The multi-disciplinary, global campaign will implement and promote initiatives to improve the health-related quality of life for people with musculoskeletal disorders throughout the world
- Musculoskeletal disease is the leading cause of disability in Canada, accounting for about 39% of long-term disability costs (\$12.6 billion)

Source: The Bone and Joint Decade Canada



Growth of calcium oxalate in the presence of osteopontin results in “dumbbell” crystals.

Ecosystem Health: Ahead of the Green Curve

by Wendy Haaf



Dr. Charles Trick transports a “hotsy” or hot probe across Lake Bonney in the Dry Valleys of Antarctica. The hotsy is used in combination with a drill to create a hole in the ice to sample the lake underneath.

Photo credit: Mark Wells

A medical school might be the last place you would expect to find an oceanographer. But then, the idea that the health of humans and all other living things are interconnected with the health of our planet is something that's only recently begun to make inroads into Canadian medical school curricula – except at Western.

At Schulich Medicine & Dentistry, the roots of ecosystem health – an innovative approach to medicine and health that recognizes the importance of our physical, social, economic and political environments – stretch back a decade, to the days before the Walkerton water crisis and SARS, when global warming wasn't making the nightly newscast for weeks on end. That's when fundraising began for an environmental safety project, which set the stage for the subsequent creation of the Ivey Chair in Molecular Toxicology, and later, the incorporation of ecosystem health into the medical school curriculum.

When it comes to looking beyond the individual patient's bedside to prevent others from contracting the same disease, Western has been ahead of the curve. Hence the presence of Charles Trick, PhD, an expert on ocean and freshwater ecosystems.

“In terms of contributors to human health, we essentially cover the molecule to the neighbourhood into the population,” says Jack Bend, PhD, a professor of pathology, physiology and pharmacology and paediatrics, who held the post of Schulich Medicine & Dentistry's Associate Dean of Research from 1999 to 2005. And the research projects themselves are taking place in regions ranging from our own backyard to countries half-way around the world.

One of the team's early projects was a Health Canada-funded simulation of a smallpox exposure in Toronto. However, the real world beat them to it. “We didn't have to do the simulation, because it was SARS,” notes Bend.

Three research initiatives that did get off the ground have focused on Walpole Island First Nation, a community located downstream from Sarnia, Ont., where a number of chemical plants are located. “For decades, large amounts of toxic substances have been released into Lake St. Clair and the St. Clair River in the form of accidental chemical spills and daily discharges,” notes Christianne Stephens, a PhD candidate in anthropology at McMaster University in Hamilton, Ont. and

“The demands of humans for things from this Earth have gone up so much over the past decade that it's now imperative we understand the impact that's having on health.”

In late 2004, Trick was appointed Beryl Ivey Chair for Ecosystem Health at the Schulich School of Medicine & Dentistry. One of his responsibilities is advancing research projects examining global environmental problems and their effects on people. He offers a few examples of why that mission has never been more timely.

“The human footprint is now getting sufficiently large. How the Earth can handle our demands has changed – our processing of materials is far faster than the Earth's ability to consume the waste,” Trick says.

In fact, that human footprint is starting to look a lot more like a crater: for instance, it takes between eight and nine hectares of land to produce the resources the average Canadian consumes each year. And according to some estimates, by 2025, water use in North America is expected to have quadrupled over 1950 levels, while water quality is expected to have dropped by 75 per cent over the same period.

“The demands of humans for things from this Earth have gone up so much over the past decade that it's now imperative we understand the impact that's having on health,” Trick stresses.

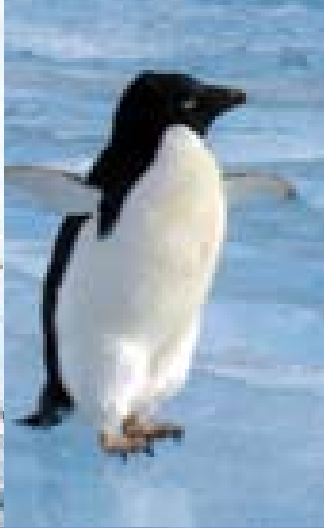
That's exactly what the Ecosystem Health Research Group aims to do. Made up of researchers from disciplines ranging from cultural anthropology and toxicology to family medicine, the group is the very definition of multidisciplinary.

member of the research team. Since this river is the main water source for the community, and hunting and fishing still form an important part of the local economy, the physiological effects of long-term exposure to contaminants are a major concern to Walpole Island residents.

Building on its earlier Health Canada-funded research in the community – which last year revealed a significant number of community members exceeded the FAO-WHO provisional tolerable weekly intake level of mercury from fresh fish alone – this summer, ecosystem health researchers will conduct blood and hair analysis to measure concentrations of mercury and persistent organic pollutants in community members.

“The team will also begin surveying existing health records to determine the incidence of illnesses linked with exposure to contaminants in children and youth, as a starting point for a future epidemiological study,” explains Stephens. Her own doctoral dissertation examines how local perceptions of health risks – including chemophobia – influence behaviour and well-being: one of the findings from last year's project revealed that many community members avoid eating fish altogether, thus missing out on the nutritional benefits of omega-3s.

Further afield, the team is also pursuing CIHR funding for a project in Kenya, where they hope to collaborate with the Sub-Saharan Africa Centre for Management and Remediation of Polluted Environments on a project aimed at examining the



“We cannot just walk away. At the end, we want to be able to have a plan of action that is doable, and has positive outcomes. We want to nurture change.”

Photos from top left: Icebreaker by Beaufort Island in a deep bay of the Southern Ocean of Antarctica. Adolescent Adele Penguin searching for food. Hazard training during snow school at McMurdo Research Base. Dr. Trick on his way to work in a common, but unpredictable November wind storm – near the base of Mount Erebus, the southernmost active volcano on earth. Ventifact stones from the upper Taylor Valley, Antarctica: highly polished, flattened facets as a result of erosion by windblown sand created in the Dry Valleys. Mom and baby Weddell seal. Ephemeral freshwater pond due to rapid glacier melting.



impact pesticides and fertilizers from the floriculture industry are having on Lake Naivasha and its surrounding population, which has swelled from 25,000 to 250,000 in the past 15 years.

The situation there perfectly encapsulates how factors like poverty and globalization can adversely affect both people and their natural surroundings, as well as how demand for products like flowers in developed countries can leave poorer nations swimming in our toxic offal. Like many developing countries, Kenya, which produces 25 per cent of flowers imported into the EU market, is a dumping ground for pesticides that have been phased out in North America, and local workers usually receive no education about how to use them safely.

In addition, more than 75 per cent of the workers, who typically earn less than one US dollar a day, are women in their prime childbearing years. “Because of poverty, many women take their children to work,” notes Bend, “so the children are being exposed occupationally.”

professor of paediatrics Dr. John Howard, the support of both former dean, Dr. Robert McMurtry, and current dean, Dr. Carol Herbert, and funding from the J.W. McConnell Family Foundation.

In fourth year, students who’ve been bitten by the ecosystem health bug can take an elective that explores the topic in greater detail. The class culminates in a four-day field trip (a collaboration between Schulich Medicine & Dentistry, Environmental Science and the Ontario Veterinary College), where participants get to see an ecosystem health issue on the ground.

“The idea is to look at one issue that exemplifies the interconnection between human health and animal health within our ecosystem,” explains Lisa Mu, who took part in this year’s event. “It’s really, really cool.” This year, the subject was the beef industry. Students visited a 6,000-head feedlot, a cattle auction, and the Walkerton Clean Water Centre, a training centre for drinking water system operators.

“We’re preparing students in a different way. It’s not flamboyant, but it’s broad, and it helps ready them for the future in a way more traditional teaching does not do.”

Furthermore, the EU doesn’t test imported flowers for pesticide residue; instead, they’re examined for insects. Consequently, “perhaps there’s a tendency to use more chemical than you really need to guarantee you can sell the flowers in Paris or London,” Bend observes. “So you’ve got pesticides we don’t tolerate anymore and practices that we don’t tolerate,” plus a market that tacitly promotes overuse of toxic chemicals.

Trick says such research projects exemplify a new paradigm for studies that assess levels of environmental contaminants. First of all, in instances like those above, the team focuses on issues identified by the community itself. Secondly, the group is committed to doing more than simply testing water samples. “We cannot just walk away,” Trick says. “At the end, we want to be able to have a plan of action that is doable, and has positive outcomes. We want to nurture change.” For instance, in the case of Walpole Island, where levels of contaminants in some fish species were lower than expected, that might involve helping draft local, culturally sensitive guidelines around fish consumption.

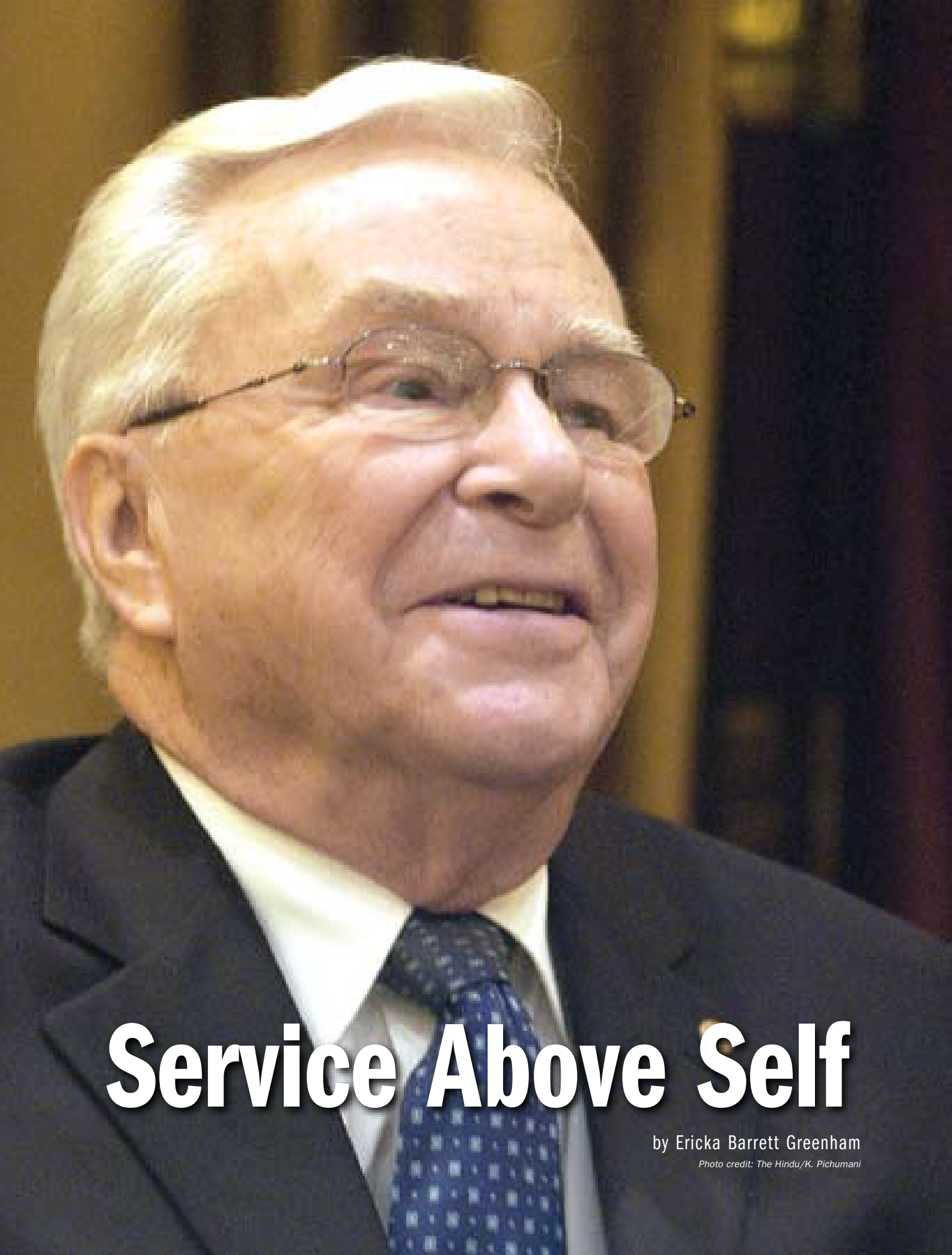
But exposure to the principles of ecosystem health at Schulich Medicine & Dentistry actually begins far upstream of research. Medical students are introduced to the basic concepts in six hours of lectures in each of first and second year as part of the community health program, thanks to the leadership of

Finally, the group participated in a moot court based around a proposed feedlot on the outskirts of Guelph, near the city’s water source. “We were all given different roles – industry proponents, environmentalists and public health – and asked to come up with a perspective,” says Mu.

The experience brought home the enormous scale of the systems needed to produce food cheaply, and how easily infections like *E. coli* can spread in that environment. “It was almost like an equivalent to clerkship – it made these issues real for us,” Mu observes.

Mohan Raja, who also attended, says he learned things that will serve him well at the bedside. “I know certain signs to recognize for *E. coli*, in case it comes my way in the future,” he says, adding he and his fellow students came away with a new appreciation for farmers. “Just the incredible knowledge it takes – they’re bright guys,” he notes. “Just getting to know the type of patients you might be helping, and what their lives are like, was helpful.”

“We’re preparing students in a different way,” underlines Trick. “It’s not flamboyant, but it’s broad, and it helps ready them for the future in a way more traditional teaching does not do.”



Service Above Self

by Ericka Barrett Greenham

Photo credit: The Hindu/K. Pichumani

It was an unusual silver wedding anniversary celebration: a trip to southern India to spearhead a measles vaccination initiative.

Since that first visit 28 years ago, Dr. Kenneth Hobbs (MD'55, BA'51) and his wife Eva (BA'53) have returned to the state of Tamil Nadu 36 times – at their own expense – to work on a variety of humanitarian projects.

The initial immunization program was prompted by Hobbs' Rotary Club in Whitby, Ont.

"The elderly Rotarians wanted to immunize all children in the state against all diseases but we didn't have enough money," recalls the retired family physician, with a fond chuckle. "I suggested we tackle measles."

On that first trip, 65,000 doses of vaccine for red measles were delivered. Within six years, with the help of the Canadian government and Rotary International, more than five million children in Tamil Nadu were inoculated.

"Those first years were very challenging," says Hobbs. "We didn't receive any help from the state government and the doctors themselves were quite uncooperative. They thought we were taking food out of their mouths."

There was also the burden of protecting the measles vaccine. Sensitive to heat, it had to be refrigerated. Without access to proper cold storage, Hobbs resorted to keeping the vaccine in the home fridges of fellow Rotarians.

A big victory came in 1986, however, when the Government of India agreed to add the measles vaccine to its Universal Immunization Program. According to World Health Organization statistics, the number of reported cases of measles in India has declined by more than 50 per cent since 1980.

But Hobbs' immunization work in the south Asian country was not complete. In 1984, as a member of Rotary International's Health, Hunger and Humanity (3H) program, he launched PolioPlus in Tamil Nadu.

PolioPlus represents Rotary International's pledge to protect every child in the world from polio by eradicating this crippling and potentially fatal disease. It is the first and largest internationally coordinated private-sector support of a public health initiative.

"After four years, there were no new cases of polio in the state even though there had been thousands previously," says Hobbs.

With the eradication of polio in Tamil Nadu well underway, Hobbs and Eva turned their attention to other Rotary projects. They were instrumental in the establishment of a rehabilitation and training centre in the city of Chennai, formerly Madras, for people with disabilities. They also participated in temple tank renewal projects to provide clean water in rural areas. Most recently, they have been involved in renovating schools in some of the most impoverished areas of Chennai to ensure clean drinking water, sufficient lighting and proper sanitation facilities.

Exemplifying the Rotary motto of "service above self," Hobbs attributes his commitment to helping others to his father.

"My father lost a leg in the First World War but he was always willing to assist someone in need. He'd tell my brothers and me 'if we all help each other, we'll all be better off.'"

Many honours have been conferred upon Hobbs. In his home country, he has received the Order of Ontario (1998), been invested as a Member of the Order of Canada (2003) and had a wing of the Whitby General Hospital named after him. In his adopted country in 2005, Hobbs was presented with a lifetime achievement award by the Rotary Club of Chennai and both he and Eva were recognized with the naming of the Rotarian Dr. Ken and Eva Hobbs Rehabilitation Centre.

According to Hobbs, however, the best thanks he has ever received "were the smiles of parents, knowing their children would be well."

When Hobbs returns to India this fall, at the age of 79, he plans to establish an eye bank at the rehabilitation centre.

"The ophthalmologists have been after me to do this for awhile," says Hobbs. "People from rural areas will be brought in and provided free eye care, including surgery if necessary. The bank will also provide ophthalmology training to doctors from Ghana so it will be a place of healing and education."



Dr. Kenneth Hobbs receives the Lifetime Achievement Award from Rotary District Governor, Dr. Shyamsundar and the President of the Rotary Club of Madras, Shanker C. Mangadu.

Photo credit: The Hindu/K Pichumani



Cancer Collaborators

by Wendy Haaf

Eva Turley, Ann Chambers and Alison Allan in Chamber's research lab.

Photo credit: Shawn Simpson

The journey between bench and bedside is long, painstaking, and strewn with obstacles – but when it comes to breast cancer research, a group of Western-affiliated researchers is bulldozing down some of those barriers, and building bridges over others.

As basic researchers who study metastasis, Ann Chambers, PhD, Eva Turley, PhD, and Alison Allan, PhD, are well-aware the bench and the bedside are separate nations, with distinct languages and cultures. However, the three women act as ambassadors between those two worlds, as part of a unique program aimed at turning

“The genesis of the unit was that we wanted to get scientists thinking more about how their research could make an impact on breast cancer patients.”

discoveries in the basic science of breast cancer into diagnostic, prognostic and therapeutic markers as quickly as possible: The Pamela Greenaway Kohlmeier Translational Breast Cancer Research Unit (TBCRU).

Named for the woman whose family founded the Breast Cancer Society of Canada after losing her to the disease at age 38, the ‘virtual’ unit was created through a partnership between that organization and the London Regional Cancer Program in 1998, thanks to a \$1.2 million donation from the Society. (The TBCRU has since been supported by donations from other donors, as well as a further \$1.5 million, five-year commitment from the BCSC in 2004.)

“The genesis of the unit was that we wanted to get scientists thinking more about how their research could make an impact on breast cancer patients,” explains TBCRU director Ann Chambers, a Canada Research Chair in Oncology and Professor of Oncology at the Schulich School of Medicine & Dentistry.

To that end Turley, a renowned breast cancer researcher who had successfully pushed some of her own discoveries closer to the cancer clinic, was recruited. “One of the reasons we hired Eva was that she has started small companies, and actually taken her research ideas and gotten them out into utility,” Chambers explains. Turley, who is also a member of Schulich Medicine & Dentistry’s Department of Oncology, uses her expertise to organize monthly seminars which bring basic scientists and clinicians together to hear experts from around the world speak on topics ranging from molecular profiling of tumours to drug development and clinical trials.

Turley says putting the two groups under one roof gets basic scientists considering clinical questions, and sparks the exchange of ideas. “When you bring people into the same room, and they hear the same talk, they start thinking, ‘well, maybe we could do this,’” Turley notes. “Collaborations happen more or less spontaneously – you have to be in proximity.” These events have helped foster a culture of multidisciplinary collaboration – for instance, a hematologist, a clinical breast pathologist, and a medical biophysicist are collaborating on various research projects now underway at the Unit.

Not only does the TBCRU promote communication and collaboration between seasoned scientists and clinicians, it also nurtures the next generation of translational researchers through a training program that funds between nine and 12 partial post-docs and studentships. “The training program is intended to recruit bright young people at an early stage, and convince them they shouldn’t just do molecular biology, or just clinical work, but to span two worlds,” Chambers explains. Nor does the training program limit its scope to the Cancer Centre itself. “Anybody in the university community who is doing translational breast cancer research is fair game,” she says.

The TBCRU also helps scientists with promising, as-yet-unproven ideas, overcome a common Catch-22. “Grant agencies won’t give you funding until you show you have done some work and your hypothesis is probably true – but you need money to do that,” explains Alison Allan, an assistant professor with the Departments

of Oncology and Anatomy & Cell Biology at Schulich Medicine & Dentistry and an oncology scientist with the London Regional Cancer Program.

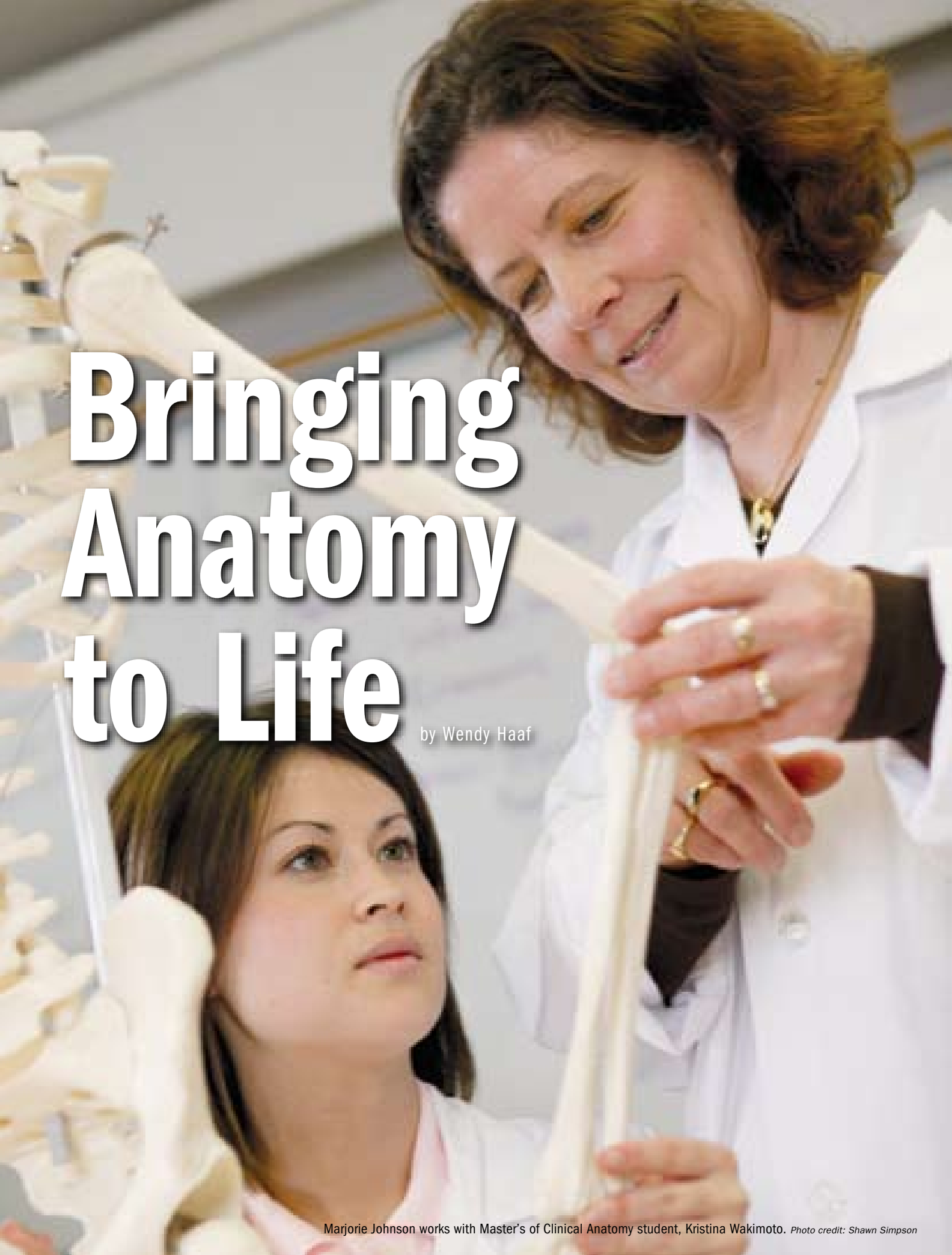
Through the cancer centre’s small grants program, however, the TBCRU is able to provide seed funding for proof of principle studies like one Allan just completed. Building on evidence from animal models suggesting the concentration of endothelial cells in the bloodstream may reflect how rapidly cancer is progressing, Allan and her collaborators developed a non-invasive method of detecting these rare cells. The researchers just finished testing the technology in patients: some with localized breast cancer, and others with metastatic disease.

While the results of that study are still pending, there’s no doubt the program that nurtured it has already successfully toppled some roadblocks. For one thing, it’s already begun to change the city’s scientific culture. While many organizations merely pay lip service to translational research, Turley says, “When we have annual reviews it’s considered a positive if you’re linked up with a company or clinical research. Not many institutions do that – it’s a big shift.”

Breast Cancer in Canada

- Breast cancer is the most common cancer among Canadian women
- In 2007, an estimated 22,300 women and 170 men will be diagnosed with breast cancer; respectively, 5,300 and 50 will die of it
- Breast cancer mortality rates have declined by 25% since 1986
- Incidence rates have stabilized since 1999

Source: Canadian Cancer Society/National Cancer Institute of Canada: Canadian Cancer Statistics 2007



Bringing Anatomy to Life

by Wendy Haaf

Thanks to a long-ago lesson involving a blanket, two footballs, and a gifted teacher, the orientation of the female reproductive organs and the subdivisions of the broad ligament will forever remain burned into Timothy Wilson's brain.

A teaching assistant in gross anatomy at the time, Wilson, PhD, remembers hearing giggles ripple through the audience of several hundred undergraduates as Marjorie Johnson, PhD, threw the heavy blanket over her head, announcing it represented the fundus of the uterus. Titters deepened to chuckles as, grasping a football 'ovary' in each hand, Johnson stretched out her 'Fallopian tube' arms.

"It was a Eureka moment," recalls Wilson, who is now an assistant professor in the Faculty of Health Sciences and the Department of Anatomy & Cell Biology at Schulich Medicine & Dentistry.

That kind of simple, imaginative demonstration is just one of the tools that Johnson has used to bring anatomy to life during her 13-year career at Western, starting in the Faculty of Health Sciences, and more recently at the Schulich School of Medicine & Dentistry. It's also just one illustration of why Johnson has been honoured with the Award of Excellence in Undergraduate Teaching (2002) from the University Students' Council, the Western Alumni Association and the Bank of Nova Scotia, as well as Western's highest teaching honour, the Edward G. Pleva Award for Excellence in Teaching (2003).

"Teaching is not about imparting knowledge," Johnson. "It's about making information relevant to students by connecting it to something that's meaningful to them." So what's her secret? "You can't be afraid to make a fool of yourself," she says. On the other hand, "You have to be true to yourself – not everyone is a comedian or a clown."

And indeed, clowning around in costume is only one of the methods Johnson has used to engage her students. For instance, she often uses her

experience as a sometime snowboarder to illustrate the location and roles of the various muscles used in that sport.

During her days of teaching Health Sciences students, Johnson even managed to inject excitement into potentially boring pre-exam review, notes Alexandra Chappelle, who just completed her BSc in Health Sciences and Biology. For example, on one occasion, Johnson devised a Jeopardy game around the exam material. "It was a big, big class, and the front half of the room was one team, and the back half the other," she explains. "Everyone really got into it!" Chappelle also remembers Johnson lugging cadaver parts into that particular class to show the students some anatomical feature or other – a rare opportunity for undergraduates.

Johnson has also played an instrumental role in developing higher-tech tools to help visual learners grasp anatomical concepts more easily, and give students opportunities to learn outside of the lecture hall or cadaver lab. One of her ideas – on-line, virtual gross anatomy labs and quizzes for medicine and dentistry students – was developed thanks to studentships funded by Instructional Innovation and Development Awards in 2004 and 2005. This year, she received funding for another summer studentship, this time to develop 3-D reconstructions of the body from a series of MRI scans, which medical students will one day view in a 3-D 'Anatatorium'.

But innovative teaching tools aren't the only things that distinguish Johnson.

"I think part of what makes Marjorie such a highly respected teacher is what she does outside of the classroom as well as in it, and the extra effort she makes beyond what is expected of her," says Peter Haase, PhD, professor in the Department of Anatomy & Cell Biology. For example, she is voluntarily offering lab tutorials to fourth-year nursing students who previously had no

“Teaching is not about imparting knowledge. It's about making information relevant to students by connecting it to something that's meaningful to them.”

exposure to cadaveric anatomy during their program. "There is no doubt she is an excellent lecturer, but in addition, students recognize that she cares very much about their well-being," he adds.

Small wonder all of the former students contacted for this article made comments echoing the following, from Sarah Trotter (Dents'10). "I was extremely lucky to have Dr. Johnson as my professor for Human Anatomy. She is by far one of the best teachers I've had over my five years at Western."

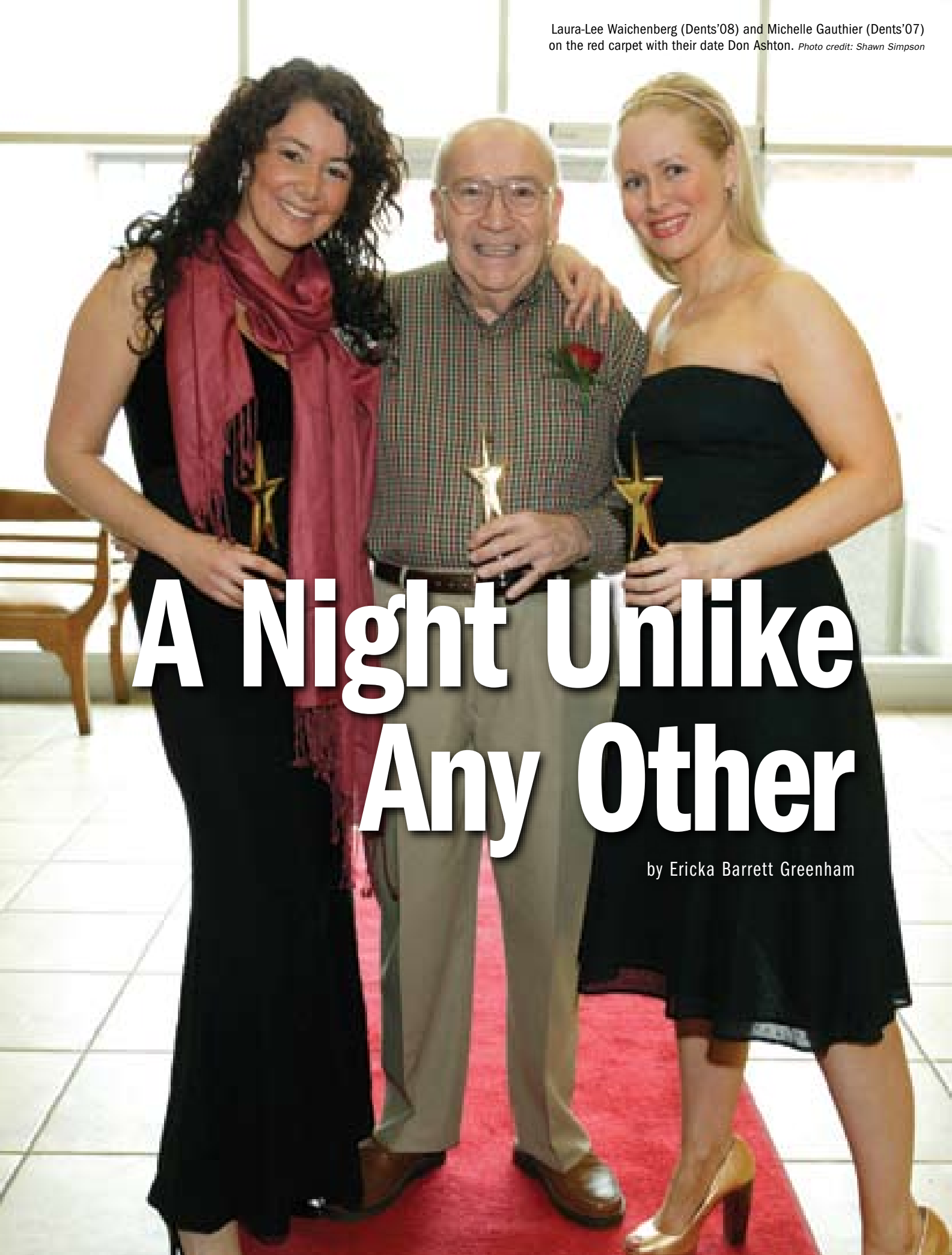
Another theme that rises repeatedly during interviews with Johnson's former students is her contagious enthusiasm for her subject. "Her passion for teaching is evident to anyone in her classroom," observes Ryan Dobbs, who studied under Johnson as a Health Sciences undergraduate and later in Schulich Medicine's anatomy lab.

Passion also animates Johnson's face when she's asked to name the best part of her job.

"The colleagues and students I work with," she responds. "And, as morbid as it sounds, opening up a body," she adds, particularly the look on the students' faces when, for the first time, they get to see the human body's miraculous inner workings in the flesh.

"And when I get a card from a student saying, 'you changed my life', that makes my day – my month – my year!"

Laura-Lee Waichenberg (Dents'08) and Michelle Gauthier (Dents'07)
on the red carpet with their date Don Ashton. Photo credit: Shawn Simpson

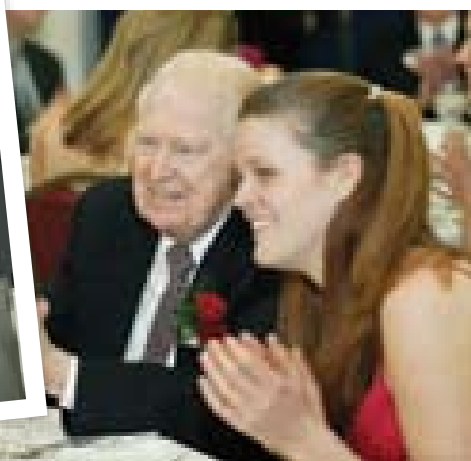


A Night Unlike Any Other

by Ericka Barrett Greenham

Pat Ashton accepts an award with David Smithson (Meds'09) and Lucas Kipp (Meds'09). Photo credit: Shawn Simpson

Below: Bill Reid and Amanda Gardhouse (Meds'10) enjoy the entertainment. Photo credit: Shawn Simpson



Seniors from Grand Wood Park Apartments & Retirement Residence and Trafalgar Terrace in London, Ont. have walked the red carpet like Hollywood stars, enjoyed fine food and conversation under the Eiffel Tower and danced the night away at the prom.

“I wanted to create an impressive event that would allow students and seniors to really meet each other, provide entertainment for the seniors and be fun for everyone involved.”

Their ‘dates’ for each of these memorable, themed evenings was a Schulich Medicine & Dentistry student.

Looking for an opportunity to get involved in the community but also wanting to create something new and exciting, Dan Nayot conceived the idea of the Intergenerational Spring Gala as a first-year medical student.

“I’ve always been very close to my grandparents and have a soft spot for the senior community. Unfortunately, the only interactions with the elderly that medical and dental students have are in a clinical setting,” says Nayot who begins his residency in Obstetrics

and Gynaecology at the University of Toronto in July. “I wanted to create an impressive event that would allow students and seniors to really meet each other, provide entertainment for the seniors and be fun for everyone involved.”

With the help of his classmates, notably Noah Ivers and Julie Johnstone, and the support of Schulich Medicine & Dentistry faculty as well as Grand Wood Park and Trafalgar Terrace, Nayot hosted the inaugural Intergenerational Spring Gala in 2005.

The evening exceeded expectations.

“We – the organizers, students, seniors and faculty members – were all very impressed how successful an event it had been,” says Nayot. “Everyone was laughing and dancing, hoping not to leave.”

Two years later, the Gala is an annual occasion. This year’s event, planned by second-year medicine students Nadine Dimnik, Michelle Lau, Jaskaren Mann and Alex Wang, attempted to recapture the essence of old Hollywood with the theme “A Red Carpet Affair.” It was attended by 65 seniors.

“In my 90s, I’m way past going out on a regular basis,” says Ina Cavers, a third-time attendee of the Gala. “But I really enjoy myself at this event. It’s like the proms I never attended as a young person. The fellowship is wonderful.”

Gerry Fisher, a retired electrical engineer originally from Holland, echos

Cavers comments: “My favourite part of the evening is the company. I’m also interested in medicine so I like discussing it with my dates – but I don’t test them too much!”

With the aging baby boomer population, medical students will spend 50 per cent of their time working with patients over the age of 65 unless they go into paediatrics, according to Dr. Laura Diachun, Geriatric Residency Program Director at Schulich Medicine.

“The merit of an event like this Gala is almost intangible,” she says. “Dating a senior creates a subtle opportunity to address stereotypes and myths about aging. Dancing with a walker or in a wheelchair demonstrates ability. Dating a medical or dental student creates opportunity to share history and voice expectations that elders have of their health care providers.”

Marc Lafontaine, owner of Grand Wood Park and Trafalgar Terrace, attends the Gala annually, welcoming the seniors as they arrive and eagerly participating in the dancing later in the evening, as well as providing financial support for the event.

“The Gala expands students’ perceptions. It provides a glimpse into a more open concept of what it means to be a senior,” says Lafontaine. “It also helps them gain a better understanding of what they can provide to the community.”

If the energy and excitement in the air the night of the Gala is any indication, the students take these lessons to heart.

“There is so much history in this room,” says first-year medical student, Jackie Nelson. “We have a lot to learn from our dates. In medical school, we spend so much time with other students that it is good to interact with other generations. Plus, the evening is just lots of fun!”

“It’s refreshing to step out of the patient-caretaker relationship or the clinical bubble,” says Alex Wang. “We start to see each other differently, in a very positive way.”

Right: Peterson with Canadian astronaut, Chris Hadfield, in Texas.

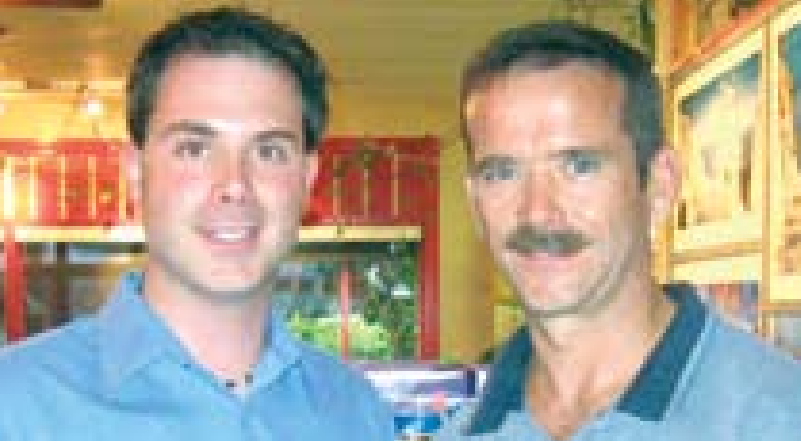
Far Right: Peterson, preparing for the hypobaric chamber, beside an Apollo-era launch suit.

“A family doctor practices mainly preventative medicine, the same as a flight surgeon. In emergency medicine, the same types of treatment questions arise and while there are differences in terms of the environment and resources, the principles are quite similar.”



The Sky is the Limit

by Ericka Barrett Greenham



With his feet firmly planted on the ground, Sean Peterson's imagination has been captured by the unknown: space.

"What intrigues me about space is that it is so relatively untouched," says this recent Schulich Medicine graduate. "It's a frontier that we've just barely begun to scratch the surface of. What could be out there? What can we learn from being out there?"

Interested in medicine in high school, Peterson chose to pursue an undergraduate degree in engineering at the University of Toronto because he wanted a career he would be happy with even if he was not admitted to medical school.

Between the second and third year of his undergraduate program, the North Bay, Ont. native completed an internship at Spar Aerospace in Brampton, Ont. At Spar, he worked on the robotics team that helped design and build the "hand" for the end of the Canada Arm on the International Space Station. With his interest in aerospace and the space industry piqued, Peterson returned to U of T and completed his degree in aerospace engineering.

After working as a business analyst for a management consulting firm in Toronto for two years, Peterson applied to medical school. With offers to attend each of Ontario's five medical schools, the commercially licensed pilot used the analytical skills he had developed in engineering and business to make his decision.

"I compared the pre-clerkship and clerkship periods of each school and looked at each from a career perspective. Schulich Medicine was the best option," says Peterson, citing the systems-based teaching approach of first and second year, the greater degree of independence Schulich Medicine students have in hospitals during third year and the timing of fourth-year electives relative to residency applications as key differentiating features.

Following his first year at the Schulich School of Medicine & Dentistry, Peterson attended the International Space University Summer Session Program in Adelaide, Australia on a scholarship from the Canadian Space Agency. The 10-week, multidisciplinary program focuses on broadening students' knowledge of all aspects of space activity through lectures by space leaders from around the world, hands-on activities, professional visits and team projects.

One of the hands-on activities in which Peterson took part was a simulated spacewalk in a neutral buoyancy pool to repair a mock satellite.

"When you're neutrally buoyant the forces you're used to – the reaction forces – are absent. Training in the pool teaches you how to work without these forces," says Peterson. "The big activity everyone jokes about is the use of drills. In space, if you turn a bolt left, you're going to turn right and actually spin around. The reason it doesn't happen on earth is because we have gravity. So if you have to bolt something in orbit, you have to hang onto something, brace yourself, and then turn on the drill."

In the summer of 2006, Peterson headed to the University of Texas Medical Branch in Galveston, Texas to participate in the Introduction to Aerospace Medicine Short Course. The only Canadian registered in the four-week course, Peterson learned about civil and military aviation, spaceflight and the specialty of aerospace medicine from military and NASA flight surgeons, FAA aviation physicians, and NASA physician-astronauts.

As part of the course the participants – all of whom were physicians or medical students – visited the Johnson Space Center. At the Center, they participated in a hypobaric chamber exercise to experience the effects of insidious depressurization in an aircraft or spacecraft.

"Each individual has different symptoms of hypoxia or low oxygen levels. The chamber allows you to recognize them in a controlled situation," says Peterson. "For me, hypoxia first caused a slowing of my cognition – we were completing simple mathematics and I developed difficulty with subtraction. Next, I felt a tingling in my fingertips. Then I noticed that my colour vision was fading. At this point I put my oxygen mask back on and all symptoms resolved."

A pragmatist, Peterson recognizes that the career opportunities in aerospace medicine are limited, especially for civilians. As such, he has decided to complete his residency in rural family medicine and then plans to do an extra year in emergency medicine. If opportunities in aerospace medicine present themselves at this point, he'll go on and do further training in the specialty.

"The benefit of doing it this way is that I'll have a broader background to draw on when looking for a job. I also very much enjoy both family and emergency medicine. In many ways, they're quite similar to what an aerospace physician might do. A family doctor practices mainly preventative medicine, the same as a flight surgeon. In emergency medicine, the same types of treatment questions arise and while there are differences in terms of the environment and resources, the principles are quite similar."

Advancing Schulich Medicine & Dentistry



Brescia University College student Rochelle Ethier shows Donna Lillie, Vice-President, Research and Education, Canadian Diabetes Association and Western President, Dr. Paul Davenport, her insulin pump after the announcement of a \$5-million partnership between Western and the Canadian Diabetes Association.

Photo credit: Rachel Lincoln

Working together to tackle diabetes

The University of Western Ontario and the Canadian Diabetes Association (CDA) have joined forces in a \$5-million partnership to advance the treatment and management of diabetes for the more than two million Canadians living with the disease. Western and the CDA have pledged \$1 million each and will work together to raise another \$3 million from private sector partners to fund the National Diabetes Management Strategy.

The CDA will specifically fund the Canadian Diabetes Association Chair in Diabetes Management at Schulich Medicine & Dentistry, an essential building block for the project.

“The Canadian Diabetes Association is proud to partner with The University of Western Ontario to ensure Canadians living with diabetes receive the best possible care,” says Michael Howlett, CDA President & Chief Executive Officer.

Diabetes and its complications cost the Canadian health care system about \$13 billion dollars annually. By 2010, it is expected more than three million Canadians will have diabetes, pushing health care costs to \$15.6 billion a year and \$19.2 billion by 2020.

Canadian adults with diabetes are twice as likely to die prematurely, compared to persons without diabetes. One in two individuals with type 2 diabetes do not have blood sugar levels under control.

“Just as the discovery of insulin forever changed the course of diabetes treatment, the research program to be led by the new Chair in Diabetes Management will chart a new path for managing this disease which affects so many Canadians,” says Schulich Medicine & Dentistry Dean, Carol Herbert.

“By working with community partners, this project aims to optimize patient care and minimize the debilitating complications that can arise from diabetes, thereby ensuring those living with diabetes have the best quality of life possible.”

Dentistry renovations

When the dust settles this fall, the renovations to the main dental clinic will be complete.

The third and final phase of the renewal and expansion of Schulich Dentistry’s facilities was entirely supported by alumni and corporate partners. Their gifts, raised over two years, totaled more than \$2.5 million.

Renovations to the main dental clinic have been done in stages to limit disruptions in learning and patient care. The completed space will contain 80 operatories, designed to provide more workspace and be easily accessible by wheelchair. The layout also allows teaching dentists easy access to four operatories, instead of only two.

“The new, state-of-the-art space enhances our ability to prepare dentists with the skills and knowledge to become leaders in the field,” says Dr. Harinder Sandhu, Associate Dean and Director, Schulich Dentistry. “It also ensures the comfort of our patients – a fact that can’t be overlooked given our students handle up to 17,000 patient visits per year.”

Oriana Ly, a third-year dental student, adds “There’s something empowering about working in a modernized clinic. It instills confidence in both students and patients. The updated clinic enhances the professional appearance of the school, making everyone a little prouder to be involved with it.”



Christy Nicolucci, DDS’07 (back); Nick Massé, Dents’09 (left); Alida Amin, Dents’09; and Ramez Salti, DDS’07 in one of the new operatories in the main dental clinic.

Photo credit: Francois Driessen



Mitch Baran at the announcement of his \$1-million gift to Schulich Medicine & Dentistry to help foster research and innovation.

Photo credit: Paul Mayne

Major gift feeds \$5M research boost

By Paul Mayne

Medical research in areas such as cancer cell migration and epilepsy received a boost from Western alumnus and London philanthropist Mitch Baran, owner and chairman of the Trudell Medical Group.

The \$1-million gift assisted in the completion of laboratories in the Department of Physiology and Pharmacology. The second floor of the Medical Sciences Building has been named The Baran Family Centre for Medical Sciences Research & Innovation.

“A facility such as this could not have been completed without the generosity of friends like Mitch Baran,” says Western President, Paul Davenport.

Baran, who earned a BA from Western in business administration in 1959, says valuing innovation has been a key to his success, as well as that of the University.

“I think it’s my passion for innovation and discovery that brought me here today,” says Baran.

Schulich Medicine & Dentistry Dean, Carol Herbert says, thanks to Baran, collaborative work may soon lead to leaps in medical knowledge, new diagnostic tools and new treatments.

“We know that innovations in medical research often occur as a result of multi-disciplinary collaborations between researchers who are focused on a common goal, and that’s what will happen in this space.”

A four-to-one funding match on the Baran gift, available through a challenge grant offered by the Kresge Foundation and government grants, has leveraged the contribution to \$5 million.

With an additional donation of \$50,000, the Baran family has also undertaken a multi-year commitment to fund a lecture series to focus on the importance of medical science research and innovation for the well-being of all Canadians.

Exploring the mind, body connection

By Karmen Dowling

Understanding the relationship between body and mind will be the main focus of the newly announced Harris-Woodman Chair in Psyche and Soma, at Schulich Medicine & Dentistry.

A \$2.8-million donation from London Jungian analyst, Judith Rachel Harris, will fund the research using neuroimaging technology to further the work first proposed by Carl Jung, one of the founding fathers of analytical psychology.

“Carl Jung envisioned this kind of work, but did not have the advanced technology and specialized scientific knowledge we have found here at Western,” says Harris. “At the same time, the Chair honours a pioneer in this area, my mentor and friend, Marion Woodman.”

Woodman, also a Londoner and Jungian analyst, has dedicated her life to understanding the relationship between conscious and unconscious processes which encompass the psyche-soma connection. She has written several books and travels the world giving lectures and workshops.

Dr. Ruth Lanius (Department of Psychiatry) is the first to hold the Chair, which she says will examine mind-body interactions by studying the brain mechanisms that underlie the effects of stress on different body systems.

“We are particularly interested in how different mental disorders can mediate these effects,” says Lanius, who is renowned for her work on post-traumatic stress syndrome.

The research could also lead to better treatments for addictions and mental disorders.

“We want to have more information about the impact on the immune system of emotional stress and trauma,” says Harris. “If we begin to see this information, then we’ll be able to help these individuals who are affected.”



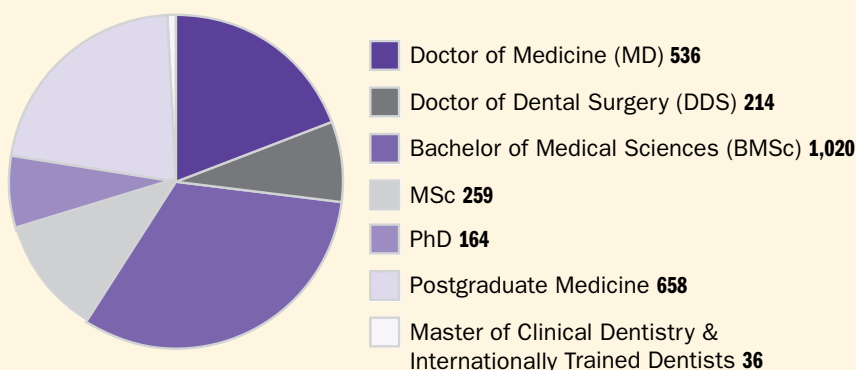
Londoners and Jungian analysts Marion Woodman (left) and Judith Harris (right) celebrate the launch of the Harris-Woodman Chair in Psyche and Soma. The Chair is held by Department of Psychiatry’s Dr. Ruth Lanius (centre).

Photo credit: Rachel Lincoln

Schulich Medicine & Dentistry

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

Student Enrolment 2006-2007



Applicants to Professional Programs 2006-2007

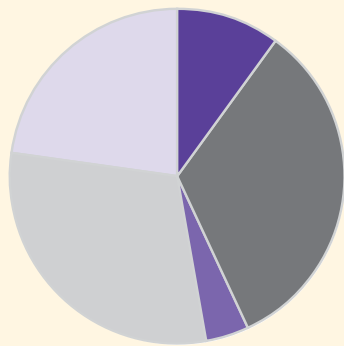
	MD	DDS
For September 2006	2,523	591
Positions Available	139	54

Student Financial Assistance 2006-2007

Type of Assistance	Number Available	Total Value
Need-Based Scholarships	233	\$2,520,403
Privately Funded Bursaries	162	\$405,150
University Supported Bursaries	Variable (according to need)	\$2,680,878*
TOTAL	395+	\$5,606,431

*Figure is based on bursaries provided to students in 2005-2006

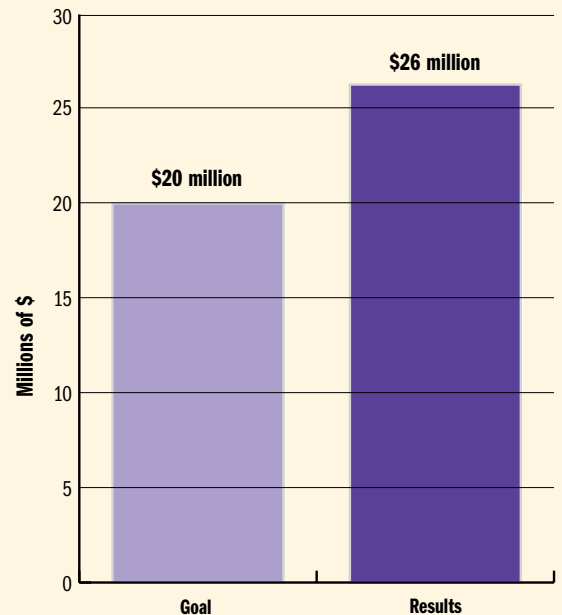
stry By the Numbers



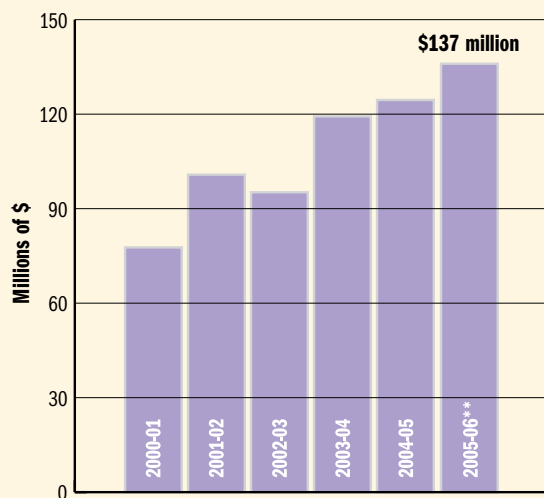
Faculty Complement as of September 30, 2006

- Full-time Faculty (PhD) **178**
- Full-time Clinical Academics **590**
- Institute Scientists **82**
- Part-time Clinical Faculty (Physicians) **569**
- Other (including casual and visiting faculty) **248**

Fundraising Success 2004-2007

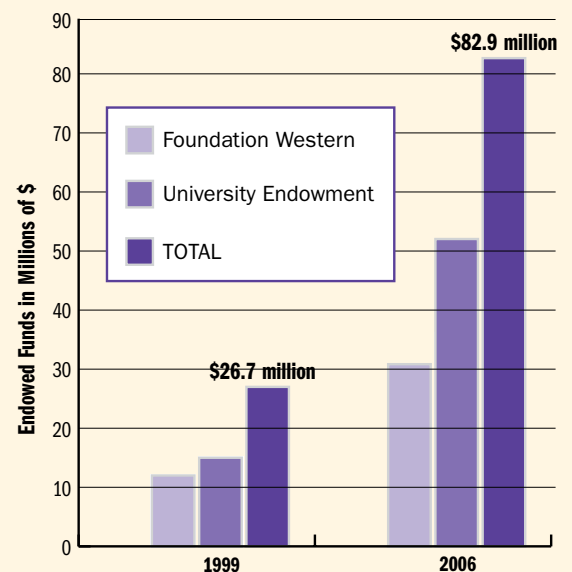


Research Funding 2000-2001 to 2005-2006*



*includes funding to Schulich Medicine & Dentistry and affiliated research institutes
 **most recent year for which data is available

Growth of Endowed Funds 1999 to 2006



*Certain funds have been reclassified in 2006

Schulich School of Medicine & Dentistry



Schulich
MEDICINE & DENTISTRY

SHAPING THE FUTURE OF HEALTH CARE



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