The Michael G. DeGroote Gift
“I am confident of McMaster’s ability to maximize the impact of this gift so that its net effect will have far-reaching benefits.”

– Michael G. DeGroote, December 17, 2003
McMaster has some of the greatest medical minds anywhere. They make possible the type of health care that we can hold up as the best in the world.

Mr. DeGroote’s gift to McMaster
University in 2003 was an act of generosity unprecedented in Canada. It gave the University the opportunity to realize a vision that would never otherwise have been possible, but with such a gift also comes great responsibility. It required enormous self-reflection and consideration to make certain that the best choices were made to build effectively on McMaster’s teaching and research capabilities and propel us to ever greater achievements for our faculty, our students, our nearby communities and society at large.

Ten years later, we are seeing the positive impact of this work and the decisions we made. We have forged a critical mass of expertise in infectious disease research and stem cell science, areas that were only beginning to emerge a decade ago. Our teaching continues to challenge and engage our students, giving them the tools to make discoveries of their own, and empowering them to achieve their potential. Our clinician scientists are advancing practice in pain management, internal medicine, stroke prevention and pediatric critical care, areas that impact the lives of huge numbers of Canadians.

These achievements have earned the Michael G. DeGroote School of Medicine a legitimate and enviable place on the world stage. None of this would have been possible without the extraordinary vision and generosity of Mr. DeGroote, to whom we owe a huge debt of gratitude.

This year is the 10th anniversary of Michael G. DeGroote’s historic $105 million gift to McMaster University. The impact of this extraordinary gift brought forth enthusiasm and wonderful possibilities for the Faculty of Health Sciences – indeed, across the entire university. McMaster gained global recognition, making us determined to maximize our goals and proud to be a pioneer among universities to receive this very generous gift. Whatever we thought might unfold – and we had a bold vision – might today be considered modest when compared to the quantum leaps we have made in the past decade. We have seen the future and it is here.

- Brilliant scientists doing groundbreaking research in critical areas.
- State-of-the-art facilities equipped with powerful new technology hinged on the next important discovery.
- Innovative new approaches to education and training.
- Young physicians who are rewriting the standards for patient care.
- Collaborative partnerships that are bringing integrated health care to a host of new communities.

Since 2003, Mr. DeGroote’s funds have launched three high-level research institutes and funded five endowed research chairs and a professorship, as well as provided matching support for five other chairs. Enrolment in the Michael G. DeGroote School of Medicine has more than doubled. We now have two thriving regional campuses, teaching sites stretching from Brampton to Simcoe and St. Catharines, and a downtown Hamilton campus under construction that will serve the needs of residents in the urban core. We have also awarded $1.3 million in postdoctoral fellowships to fuel the next generation of health scientists.

Michael DeGroote made all of this possible. We are honoured to realize his vision with a new era of ingenuity at McMaster that will continue to explore and implement new frontiers for many years to come.

Patrick Deane, PhD
President and Vice-Chancellor,
McMaster University

John Kelton, MD
Dean and Vice-President,
Faculty of Health Sciences
Game changer

MICHAEL G. DeGROOTE’S $105 MILLION GIFT USHERED IN A NEW ERA OF INNOVATION AND OPTIMISM AT McMaster UNIVERSITY AND PROVED THAT CHANGE STARTS WITH ONE PERSON.

A week before Christmas in 2003, Michael G. DeGroote made headlines across Canada for his unprecedented gift of $105 million to the medical school at McMaster University. It remains the largest single donation by an individual ever made to a Canadian university.

The successful businessman turned philanthropist shared a vision with McMaster for where health care should go. He wanted to bring the best scientific minds together to attack the most pressing health concerns of our time. He also knew from personal experience that there was a need to improve the quality and delivery of health care.

“The genius of Michael’s commitment is that it has always embraced both the macro and the micro,” says Dr. John Kelton, dean and vice-president of the Faculty of Health Sciences.

“He knows outstanding researchers working with the very best facilities and equipment can yield new and exciting medical discoveries that can have a far-reaching global impact.

“He also knows that highly trained health care professionals are critical to ensuring that this knowledge is delivered effectively and compassionately to ordinary people every day.

“We are fortunate that he believed in McMaster’s ability to do both.”

The DeGroote gift catapulted McMaster’s medical school from a Canadian leader in health research and education to a global presence, capable of attracting top-notch scientists from around the world.

“It really put us in the big leagues. There was just a can-do sense about this.”

– Dr. Susan Denburg

Bhatia has built a stem cell cancer research team second to none. Its discovery that the antipsychotic drug thioridazine kills cancer stem cells responsible for leukemia earned a place in the Canadian Cancer Society’s top 10 cancer breakthroughs of 2012. And the team garnered headlines around the world when it revealed that human blood cells can be made from adult skin, a finding that could make donor matches for bone marrow transplants a thing of the past.

Bhatia says rapid discoveries like this are unheard of for an institute as young as McMaster’s — as are its clinical trials for drugs under development and its move into aging research.

“Michael DeGroote definitely planted the seed for all of this,” says Bhatia.

McMaster was also able to recruit top microbiology experts for its infectious diseases institute, led by Dr. Gerry Wright, and they have developed a synergy with stem cell scientists.

“We are now developing, on the basis of those two institutes, a novel platform for drug discovery that will have broad applications,” says Collins.

The academic stature of the Faculty of Health Sciences has been enhanced by the prestigious Michael G. DeGroote post-doctoral fellowship awards which are funded by the Development Fund. The awards increase McMaster’s ability to recruit outstanding post-doctoral fellows like Dr. Jonathan Schertzer who is investigating the role inflammation plays in obesity and diabetes.

The DeGroote fellowship helped Schertzer make the transition from post-doctoral fellow to faculty as an assistant professor of biochemistry and biomedical sciences and become “one of our stars,” says Collins.

The DeGroote gift has been a catalyst for an expansion of the medical school beyond the main McMaster campus to regional campuses at Brock University in St. Catharines and the University of Waterloo in Kitchener, where it partners with the university’s School of Pharmacy. Educational campuses with leading-edge family medicine training programs for medical students, residents and other health care students have been established at Joseph Brant Hospital in Burlington and Brantford General Hospital.

Denburg says the educational environment in which students learn at McMaster is enriched because of the university’s ability to attract, and keep, top researchers and scientists, such as Dr. Sonia Anand, Heart and Stroke Foundation of Ontario/Michael G.
Michael G. DeGroote seen here with Dr. John Kelton (left) and Dr. Akbar Panju (right) in front of the Michael G. DeGroote Centre for Learning and Discovery.
DeGroote Chair in Population Health Research, and Dr. Paola Muti, who was scientific director of the Italian National Cancer Institute Regina Elena in Rome and became the inaugural holder of the ArcelorMittal Dofasco Chair in Experimental Cancer Therapeutics.

“That has a positive effect on our educational offerings because world class scientists are supervising students in their graduate research and also engaging as lecturers to undergraduate students,” she says.

There has been a renewed sense of empowerment and excitement. The medical school was ready to forge new ground when the Ministry of Health and Long Term Care announced it was looking for different ways of including new care providers, such as physician assistants, into the health care system. “We jumped at the opportunity before anybody to take on the Physician Assistants (PA) program,” says Denburg. Ontario’s first program to train physician assistants to work alongside physicians was launched at McMaster in 2008 with great success.

The DeGroote gift continues to improve lives across the lifespan – from critically ill premature infants to seniors. The Michael G. DeGroote Institute for Pain Research and Care is working to understand the underlying mechanism of chronic pain with the goal of developing prevention, diagnosis and treatment strategies. Recently, researchers with the institute’s Michael G. DeGroote National Pain Centre led the development of new national

“Michael DeGroote has achieved much in his life, but his gift to McMaster is sure to be one of his crowning achievements. He could have retired to the sidelines, but he took the ball and ran with it.

People the world over will be the beneficiaries.” – Ron Joyce (top left)
guidelines for the use of opioids for non-cancer pain.

A state-of-the-art Michael G. DeGroote Pediatric Intensive Care Unit at McMaster Children’s Hospital opened in June, 2012, made possible by a $10-million donation that was part of the $105-million gift to McMaster. The unit provides care for children facing severe traumatic injury, life-threatening diseases, critical care postoperative neurosurgery and orthopedic surgery.

The Michael G. DeGroote Centre for Learning and Discovery (MDCL) is a landmark on campus with its advanced research institutes, classrooms, and state-of-the-art laboratories. Its striking atrium with interior garden, waterfall and floating third floor office space transforms easily from a meeting place for formal functions to a peaceful oasis on campus for students, faculty and staff.

Construction is now in full swing on McMaster’s new downtown Health Campus, which will house the School of Medicine’s Department of Family Medicine, the McMaster Continuing Health Sciences Education program and other research programs, along with Hamilton’s Public Health Services. By 2015, teams of family doctors, nurse practitioners, physician assistants, occupational therapists and physiotherapists will be providing integrated health care to residents of Hamilton’s urban core.

As DeGroote once said: “We are building the dream piece by piece.”

“Michael DeGroote’s real gift was the realization that innovative research, integrated with the needs of the community, can advance health care solutions and improve the quality of life for everyone, including our most vulnerable.” – Suzanne Labarge (opposite page, bottom right)
Michael G. DeGroote School of Medicine

NEARLY HALF A CENTURY SINCE REDEFINING THE WAY MEDICINE IS TAUGHT, McMaster CONTINUES TO DEFY CONVENTION AND PUSH THE LIMITS IN LEARNING AND DISCOVERY.

The past decade has been one of phenomenal growth for the Michael G. DeGroote School of Medicine. New programs and facilities have been added, two regional campuses were opened and are thriving, and expansion plans are underway for the Department of Family Medicine that include a downtown Hamilton campus and a new home for the Halton McMaster Family Health Centre in Burlington.

“McMaster’s School of Medicine is not known for resting on its laurels,” says Dr. Rob Whyte, assistant dean of the undergraduate medical program. “Our training is constantly evolving to ensure we remain at the leading edge of health sciences education.”

The result is a School that is bigger and better than ever before. This year saw 205 incoming undergraduate students, almost double the enrolment of 2003. They include 28 students each at the Waterloo Regional Campus, which opened in 2007, and at the Niagara Regional Campus, where the doors opened a year later. To date, the regional campuses have trained 152 physicians in these two growing communities.

Even more exciting is the caliber of the students, says Whyte. “Our innovative problem-based learning approach attracts high quality candidates who have interesting and varied backgrounds, students who are not just strong academically but who bring other important qualities.”

McMaster’s unique medical admissions tool known as CASPer (Computer-Based Assessment for Sampling Personal Characteristics) also helps.

Introduced in 2010, CASPer is an online test in which candidates are questioned about non-medical scenarios. “It helps reveal their values and ethics and determine how likely they are to succeed in medical school,” says Whyte. “The 2013 graduating class is the first to be admitted using CASPer and, judging by the quality of our graduates, it appears it did everything we hoped it would do.”

Quality improvement in the medical program has also been enhanced with a brand new administrative system that will provide faster and better access to data, he says. The School has hired a program evaluation chair to study quality improvement in the medical program, and is reinstating its leadership review to help academic leaders pinpoint areas for improvement.

“McMaster’s medical school continues to be ranked highly, nationally and globally, for the quality of its clinical, pre-clinical and health programs,” says Dr. Alan Neville, the Faculty’s associate dean of education. “But we can always be better.”

“Our training is constantly evolving to ensure that we remain at the leading edge of health sciences education.”

– Dr. Rob Whyte

A pioneer in placing students in the community for clinical rotations, the School’s Mac-CARE (McMaster Community and Rural Education) program has expanded over the past decade, says Neville, “to become the major organizational framework for our entire distributed medical education (DME) initiative.”

Brantford became the newest community to benefit with the opening this year of the Grand Erie Six Nations Clinical Education Campus – Brantford Centre. The 10,000-square-foot space, complete with classrooms, offices, lounges and “call rooms” for residents on duty, will be home base for McMaster medical students and residents learning at the Brant Community Healthcare System, which serves all of Brant County and the Six Nations Territory.

Building diversity into McMaster’s medical education is a priority, notes Whyte, and that goal was strengthened this year with the appointment of a diversity and engagement chair, Dr. Albina Veltman. She will examine the School’s curriculum and admission policies to ensure they are more inclusive and culturally sensitive. She also plans to work with local Aboriginal partners to look for opportunities to improve the learning environment for these students.

Curriculum enhancements continue to be a focus. The combined MD/PhD program, introduced in 2007, has been so successful that discussions are now underway to offer a combined MD and MBA program and a combined MD and Masters in Global Health degree.

“As always, we are responding to the students, and they are telling us they want a medical program that is more self-directed,” says Whyte.

It’s an exciting time for the School of Medicine. Two major capital projects will address the Department of Family Medicine’s rapid growth, which will see the number of residents rise to 200 by 2014.

Construction is half complete on the new downtown Health Campus that will see 4,000 McMaster students a year and provide physicians to 15,000 Hamiltonians currently without a family doctor.

Slated to open in 2015, it will become the new home of the Department of Family Medicine and of OSCAR, the electronic record system created by McMaster and now being used by more than 2,000 physicians and three million patients across Canada. Last year, McMaster became a lead partner in a $40 million project that will build on OSCAR to develop a new people-centred, technology-enabled health and wellness system.
Planning is also underway for the three-year-old Halton McMaster Family Health Centre to be relocated next year to Burlington’s Joseph Brant Hospital. It will become a teaching hospital, expanding McMaster’s reach into Halton Region and increasing opportunities for both medical students and residents.

Meanwhile, the School’s regional campuses in Waterloo and Niagara continue to flourish.

Last year, the Niagara campus moved into its new home in the Cairns Family Health and Bioscience Research Complex at Brock University in St. Catharines. The move coincided with the opening of the Niagara Health System’s new St. Catharine’s hospital, a state-of-the-art facility equipped with the latest in 21st century technology.

Students at the campus will experience the technology first hand thanks to a new interprofessional education project that will have them working in teams and practicing their skills on wards with real patients.

The Niagara campus also launched a pilot curriculum last year for McMaster and Brock University students to examine quality improvement in health care. The quality improvement projects are being expanded this year, in collaboration with hospitals, long-term care facilities and rehabilitation hospitals.

“Both projects are helping to make our medical program stronger by exposing students to other professionals, such as nurses, paramedics and rehabilitation providers, who are not represented on campus,” says Dr. Karl Stobbe, regional assistant
dean of the Niagara campus. “These kinds of collaborations also improve the quality of patient care in these communities.”

The Waterloo campus is involved in similar collaborative projects with the University of Waterloo’s School of Pharmacy. Pharmacy and medical students participated in an interprofessional pain education program with Dr. Norman Buckley, chair of the Department of Anesthesia, and interprofessional case conferences have been held with U of W optometry students, nursing students at Conestoga College, and social work students at Wilfrid Laurier University.

Another local partnership is with Homewood Health Centre, a mental health facility in Guelph and the campus’ lead training site for psychiatry. “The facility comes with a rich history of experience for students to benefit from,” says Dr. Cathy Morris, regional assistant dean of the Waterloo campus. “We are currently looking at other partnerships that will allow us to build on local strengths and opportunities.”

In 2012, McMaster and the University of Waterloo deepened their collaboration with the opening of a brand new anatomy laboratory, shared between McMaster students and U of W’s School of Pharmacy students. “The students absolutely love the facility,” says Morris. “They used to share a small space at the anatomy lab at U of W, and could only access it a couple of hours one day a week. Now they have access whenever they need it.”

The campus is also working to roll out a clinical teaching unit in the coming year for internal medicine students training at Grand River Hospital in Kitchener, as part of the hospital’s commitment to enhance medical education. “It’s another example of how McMaster’s presence is influencing the delivery of health care locally,” says Morris.
Innovation knows no boundaries, so it’s not surprising that graduates of the Michael G. DeGroote School of Medicine are having a global impact. And it’s not just in medicine.

Alumni Dr. Eric Hoskins and his wife Dr. Samantha Nutt may be the ultimate power couple. Renowned for their humanitarian efforts on behalf of children in war-torn regions around the world, the co-founders of War Child Canada continue to fight for others, Nutt as Executive Director of War Child and Hoskins as Ontario’s Minister of Economic Development, Trade and Employment.

Their dedicated activism has earned them numerous awards – among them, recognition by TIME magazine as one of Canada’s five leading activists (Nutt) and the United Nations Association of Canada Lester B. Pearson Peace Medal (Hoskins).

Here’s what some of our other grads are doing, and what they say about McMaster’s role in preparing them for it.

**Dr. Paula Rochon**

Vice President, Research, Women’s College Hospital; Senior Scientist, Women’s College Research Institute; Professor, Medicine and Health Policy Management and Evaluation, University of Toronto

“McMaster’s innovative culture taught me to value broad collaborations and allow individuals to work together to find solutions to challenging problems. This approach has been valuable in my research as well as my clinical work.”

**Dr. Leonard Reyno**

Chief Medical Officer and Senior Vice President, Agensys, Inc., Santa Monica, California

“All of us benefit from the relentless pursuit of excellence and lifelong learning that McMaster graduates bring to diverse roles across the globe. Mr. DeGroote’s gift is critical to ensuring this potential is fully realized.”

**Dr. Adrian Park**

Chair, Department of Surgery, Anne Arundel Medical Center, Annapolis, Maryland

“The best thing about McMaster is that we learned how to learn – forever. Michael DeGroote invested not just in “bricks and mortar” or research and educational “stuff”, but in people. And there is no more worthy investment than that.”

**Dr. Gord Guyatt**

Distinguished University Professor, Departments of Clinical Epidemiology and Biostatistics, and Medicine

“Michael DeGroote has played a key role in keeping a small institution a world leader in medical research.”

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**McMaster launched the first university-based midwifery program in 1993, but it took another 10 years to find it a permanent home.**

“We were thrilled to move to the Michael G. DeGroote Centre for Learning and Discovery in 2003. It allowed students and faculty to more fully participate in campus activities,” says Dr. Eileen Hutton, assistant dean of the midwifery education program.

The 20-year-old program is the oldest in Canada, and a growing interest among pregnant women for midwifery care has made it more popular than ever. Since 2003, admissions have more than doubled from 142 to 308.

“As a program, we have initiated many inter-professional activities for our midwifery students who spend time together in the classroom and in clinical settings with nurses, medical students and obstetrical, family practice and pediatric residents,” says Hutton.

Faculty members and graduates of the program are making significant contributions to the midwifery profession.

Dr. Hutton is the first midwife in Canada to be appointed full professor since the introduction of regulated midwifery in 1993. She also holds a professorship in the Netherlands at the VU University Medical Centre (VUmc) in Amsterdam.

Dr. Patricia McNiven, associate professor, is editor of the Canadian Journal of Midwifery Research and Practice, a position she has held since 2008.

In 2012, student Otis Kryzanovskas became the first male to graduate from a midwifery program in Canada with a Bachelor of Health Sciences (Midwifery) degree.

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THE POWER OF ONE

Institute news

MICHAEL G. DeGROOTE INSTITUTE FOR INFECTIOUS DISEASE RESEARCH

When the Michael G. DeGroote Institute for Infectious Disease Research (IIDR) opened in 2009, it was already a living and breathing entity. Its 30 researchers from varying fields across campus were engaged in new partnerships, sharing ideas, forging new projects and building a hotspot for the next generation of infectious disease specialists. Simultaneously, world-class researchers from around the globe were being recruited bringing expertise in malaria research, bacterial immunology and the study of bioactive small molecules.

“Since its inception, the institute has attracted a unique set of investigators that cross the divide between basic sciences and the clinic and who are working on life-altering research, translating basic science into new products and changes in clinical practice,” says its scientific director Dr. Gerry Wright.

Key to the IIDR’s scientific success has been its facilities in the Michael G. DeGroote Centre for Learning and Discovery: The Centre for Microbial Chemical Biology (CMCB), a 12,000-square-foot lab supporting research at the interface of chemistry and biology; a High Throughput Screening (HTS) Lab outfitted with cutting-edge robotics, instrumentation and research staff; and a Biosafety Level 3 lab with dedicated animal facilities, a state-of-the-art flow cytometry facility and space for current and future projects.

“All of this is positioning McMaster as an internationally recognized centre of scientific excellence,” says Wright. I am proud of our advances over the past several years and eagerly anticipate the future as we forge ahead with innovation, discovery and determination.”

Discoveries have included:

- Evolutionary geneticist Dr. Hendrik Poinar sequenced the entire genome of the bacterium that caused the Black Death.
- Geneticist Dr. Tim Gilberger found leads for new anti-malaria drugs.
- Immunologist Dr. Charu Kaushic developed prevention strategies for HIV transmission in women.
- Biochemist Dr. Eric Brown discovered a better way to battle infection associated with cystic fibrosis.
- Pathologist Dr. Mark Loeb is beginning to understand how dengue fever is emerging as a growing global public health threat that could impact North America.

Research coordinator Kalinka Koteva and Andrew King, a PhD student in chemical biology, battle antibiotic resistance and infectious diseases as members of the world-class Michael G. DeGroote Institute for Infectious Disease Research.
CHAIR IN INFECTION AND ANTI-INFECTIVE RESEARCH

No one was more excited than Dr. Gerry Wright to hear Michael G. DeGroote announce he was awarding an unprecedented $105 million to McMaster University, including $10 million earmarked for a centre for research and education in infectious diseases. 

“It was an incredible moment,” he says, recalling the feeling of vivid excitement that emanated through the large and airy student atrium. “It was something that was going to put McMaster on the world stage. We already had significant expertise across campus in the area of infectious disease research. All we needed was a home for it.”

Three years later Wright was announced as scientific director of the new Michael G. DeGroote Institute for Infectious Disease Research (IIDR) and holder of the new endowed Chair in Infection and Anti-Infective Research.

When it opened in June 2009, the institute had already emerged as a focal point for leading-edge research into infectious disease.

“We were accomplishing what we set out to do. We brought together the best and brightest scientists involved in infectious disease research from across campus, and their ideas converged to create better science,” says Wright.

“We also provided seed money for collaborations that led to powerful and significant provincial grants and established the world-leading Centre for Microbial Chemical Biology that links pressing medical and biological questions with advanced chemical technology.

“Major research findings published in the world’s greatest scientific journals pushed our understanding of science and several of our research members became recognized as leaders in their fields.”

“We brought together the best and brightest scientists, and their ideas converged to create better science.”

— Dr. Gerry Wright

This year, Wright received the CSM Murray Award for Career Achievement from the Canadian Society of Microbiologists, the organization’s premier award recognizing key contributions to microbiological research.

It adds to his impressive curriculum vitae, which includes more than 180 papers and book chapters. He is also the recipient of a Canadian Institutes of Health Research Scientist award, a Medical Research Council of Canada Scholar award, a Killam Research Fellowship, a Premier’s Research Excellence award and the Polanyi Prize. Wright was elected a Fellow of the Royal Society of Canada in 2012 and a Fellow of the American Academy of Microbiology in 2013.

Michael G. DeGroote Gift Impact – Institute for Infectious Disease Research ($ Millions)

IIDR has leveraged seed funding of $10 million to attract more than $150 million, fueling its quest to find new leads for the next generation of antibiotics.

- DeGroote endowment
- Internal funding (McMaster and affiliated hospitals)
- Corporate-sponsored research
- Government-funded grants
- Funding from not-for-profit organizations

IIDR researchers are combatting infectious disease on many fronts:

Dr. Fiona Smaill, professor and chair of the Department of Pathology and Molecular Medicine, and Dr. Zhou Xing, professor of pathology and molecular medicine, genetically modified a cold virus to be a tuberculosis vaccine. This vaccine has been evaluated in a wide range of animal models and shows promise for further testing in humans.

The Wright lab found resistance itself is a successful pathway for discovering new antibiotic drugs, by applying resistance to screens (a drug discovery process) to find new drug candidates.

Dr. Eric Brown, professor of biochemistry and biomedical sciences, and Dr. Dawn Bowdish, professor of pathology and molecular medicine, have taken a new approach to discovering drug leads capable of blocking the growth of methicillin-resistant Staphylococcus aureus (MRSA). Their labs targeted bacterial membranes with combinations of membrane-active chemicals that work together to produce a greater effect and avoid toxicity.

Dr. Nathan Magarvey, assistant professor in the Departments of Biochemistry and Biomedical Sciences and Chemistry & Chemical Biology, discovered that gold-resistant bacterium Delftia acidovorans can turn toxic water-soluble gold into a solid gold form. This was the first demonstration that a gold-resistant microbe secretes a metabolite that can protect against toxic gold.

Dr. Brian Coombes, associate professor in the Department of Biochemistry and Biomedical Sciences, developed a mouse model that shows that Crohn’s-associated E. coli can cause chronic infection in the mouse gut, a new model that will allow researchers to understand the effects of chronic colonization on the host immune system and how this might play a role in disease development.

Dr. David Earn, professor in the Department of Mathematics and Statistics, investigated why flu arrives in multiple waves and discovered three contributing factors: the closing and opening of schools, temperature changes and – most importantly – changes in human behavior.
Institute news

McMaster Stem Cell and Cancer Research Institute

The impressive facilities of the McMaster Stem Cell and Cancer Research Institute include this Cell Growth and Discovery Workcell. It enables scientists to screen stem cells for unique properties that could lead to breakthroughs in drug discovery and development.

**Dr. Mick Bhatia** always believed a better understanding of human stem cells held the potential for discovering innovative drugs to treat cancer and improve patient care.

His vision was out of step with the times in 2006 as colleagues concentrated their stem cell research on mice, frogs and worms. But his belief in the promise of human stem cells couldn’t be shaken, and philanthropist/businessman Michael G. DeGroote believed in it, too. His $105 million gift included $10 million to establish the McMaster Stem Cell and Cancer Research Institute.

“Obviously, the resources are incredible. But DeGroote’s generosity in allowing the resources to be used for our vision is what’s really remarkable,” says Bhatia. “He captured the essence of what we wanted to do, what would go really well with our strengths here at McMaster.

The fact that he said, ‘Yes, go for it. I like this idea.’ – that is very unique.”

The first-of-its-kind, 16,000-square-foot institute combines laboratory and administrative space within the Michael G. DeGroote Centre for Learning and Discovery and the Health Sciences Centre. In keeping with Bhatia’s vision, researchers work in close proximity to the hospital where they benefit from immediate access to human samples (e.g., cord blood, bone marrow aspirate) and the opportunity to rub elbows with doctors working with patients.

“Our vision was to make it possible for physicians to walk the grounds of a basic scientific institute where people and equipment are co-located,” says Bhatia. “This was very important to me because my view is that science is a contact sport – you have to be engaging with each other to gain and grow. It’s a sharing. You don’t hold meetings. You bump into each other at the water fountain or while you’re lining up to use a common piece of equipment.”

The institute encompasses the programs of five scientists, 40 trainees and staff. In the past five years, it has created new state-of-the-art facilities such as the David Braley Human Stem Cell Screening Facility, which is focused on the development of innovative large-scale drug discovery and drug safety evaluation platforms based on the use of stem cells.

In the future, the institute will tackle issues on aging, particularly the application of stem cell technology to neurological diseases such as Parkinson’s and Alzheimer’s, Bhatia says. “So, we are taking our ship and – we are not turning it around, we are not changing – we are just tilting it toward that direction (because) that’s where the need is.”
Why do people get sick?
How do they become sick? Did something go wrong with their cells? If so, how did it happen? Is there a way to prevent it from happening? How can it be stopped?

Probing these questions by gaining a broader understanding of human biology and how human cells work is paramount for Dr. Mick Bhatia, scientific director of McMaster University’s Stem Cell and Cancer Research Institute (SCC-RI). He holds the Chair in Stem Cell and Cancer Biology and the Canada Research Chair in Human Stem Cell Biology.

Bhatia made a major advancement with his breakthrough discovery that skin cells can be turned into blood. “It changed everyone’s thinking,” he says. “I think the paradigm shift wasn’t that we have a shortage of blood and now we can solve this problem, but that we can manipulate human cells. We can take a cell and change it.”

The discovery has proven to be a springboard to new avenues for research and broader collaborations. “One of the things we are now able to do is take a patient’s blood given at a doctor’s office and turn it directly into brain cells. That’s not skin to blood, that’s blood to neurals. That wouldn’t have started unless we thought it was even possible.”

“Michael DeGroote’s investment dropped a coin into the well and made a lot of other people come to the well. That is a very important thing.”

– Dr. Mick Bhatia

Bhatia has new drugs in development with dozens of patents underway – all at different stages of approval – and clinical trials about to begin. Collaborations now go beyond discussions with cell biologists and physicians to include specialists in chemistry, mathematics, robotics and automation groups. A spin-off company, RITS (Regenerative Inducing Therapeutics), has been created in partnership with the mathematics department at the University of Waterloo’s Perimeter Institute for Theoretical Physics.

In addition to teaching and supervising undergraduate students and postdoctoral fellows, Bhatia participates in many different professional organizations, serves as a scientific and academic reviewer, contributes articles to numerous journals, and speaks on stem cell biology at international conferences.

He was recently invited to be keynote speaker at the American Society of Chemistry’s annual meeting in Indiana, a rare opportunity for a stem cell biologist.

Bhatia also shares his excitement about stem cell research and discoveries with those closer to home. He has been a keynote speaker at the Bay Area Science and Engineering Fair (BASEF), participated in interactive videoconference sessions with science students in Oakville, Ontario and Cochrane, Alberta, and hosted day camp sessions on stem cell research for local high school students.

“Being Chair has allowed me to go out and work with other disciplines, such as mathematics and robotics, and to talk about drug discovery,” says Bhatia. “What I have been able to do for the institute at McMaster, and what McMaster has been able to do for me, is entirely due to this Chair position.”

SCC-RI researchers have captured worldwide attention with these groundbreaking discoveries:

That stem cells located in bone marrow at the ends of bones are superior at regenerating blood cells, including immune system cells, than those found in the shafts of bones. The finding could lead to better bone marrow transplants for more patients.

The discovery of a new drug, thioridazine, that turns cancer stem cells into non-cancerous cells and leaves normal stem cells alone. Clinical trials are now being designed to see if the drug can cause remission in cancer patients.

That human blood can be made from adult skin, a discovery that may soon allow people to create blood from a patch of their own skin to provide transfusions for surgery, cancer treatments or blood conditions, such as anemia.
The largest university-affiliated pain clinic in the country is just around the corner for the McMaster University Medical Centre (MUMC).

Construction will begin next year on the clinic, a jewel in the crown of the Michael G. DeGroote Institute for Pain Research and Care.

“This will establish McMaster as a leader in pain research, education and treatment,” said the institute’s medical director, Dr. Akbar Panju.

Located on the fourth floor of MUMC, the clinic will bring together pain services now offered at Hamilton General Hospital and Chedoke Hospital, and a pain program for complex case management affiliated with the Department of Anesthesia at the Michael G. DeGroote School of Medicine.

With areas specializing in post-stroke, non-cancer pelvic and neuropathic pain, the clinic is expected to be a local, regional and national referral centre for patients suffering chronic pain.

It will offer a full-range of care from interventional and medical to cognitive behavioral and rehabilitation.

“We are also working full out to ensure we are ready from day one to respond to the demand for our services,” says the clinic’s medical director Dr. Norman Buckley. “We’ve revised our referral and triage process to facilitate working through the long wait list. We plan to introduce telephone and Telehealth Ontario consultations to minimize travel for patients and improve response times to referring physicians’ requests.”

Another exciting development is the institute’s involvement with Project Echo (Extension for Community Healthcare Outcomes). The project pairs specialists with primary-care physicians via video teleconferencing to teach them how to treat complex, chronic conditions. It will ensure that the pain clinic’s comprehensive approach to chronic pain management reaches patients in rural and underserved areas, where resources are often limited.

“Our hope is that the ECHO model of care will translate into improved pain care within our communities,” says Buckley.

Plans are also underway to develop a website to educate the public about chronic post-stroke pain. It will allow patients to receive information about their condition, participate in research studies, and provide feedback on their experiences.

Says Buckley: “McMaster was one of the first places to have a pain clinic, and we have had a group of people in the city involved with pain treatment for years. So we are tapping into a rich legacy of clinical expertise, research and education.”
**MEDARD DeGROOTE CHAIR IN MEDICINE**

**Patient-centred care** is not a new concept in health and medicine, but it’s one that Michael G. DeGroote firmly believes in. Pioneering new models of health care delivery that improve patient access and empower individuals to take charge of their own health and wellness is exactly what he had in mind for the Medard DeGroote Chair in Medicine.

“Doctors of internal medicine have to deal with a wide range of problems, from common to rare and simple to complex. Solving these problems requires a whole patient approach that values patient-doctor communication and collaboration,” says Dr. Akbar Panju, the chair’s inaugural holder.

This approach, combined with his commitment to evidence-based medicine, has allowed the vice-chair of clinical programs in the Department of Medicine to grow the internal medicine program at McMaster and Hamilton Health Sciences into a strong and vibrant clinical teaching unit.

Talented, young internists have been attracted to the program and young faculty members have been encouraged to pursue a career in this specialty. “There has been a renaissance of interest in general internal medicine. It’s a huge paradigm shift,” says Panju.

“Solving problems requires a whole patient approach that values communication and collaboration.”

— Dr. Akbar Panju

The division is now involved in research examining ways to improve communication among health care professionals and to learn how fewer on-call hours for residents is impacting patient care.

Panju has also assembled a group to look at different treatment options for patients with thalamic/post stroke pain, a personal issue for DeGroote after suffering a stroke 12 years ago.

A large international study in more than 20 countries on people with stroke has just been completed. Results show three to four per cent of patients who have had a stroke develop this intractable, severe pain.

Panju says a meta-analysis of current treatments will be undertaken with the possibility of researchers embarking on a major international trial to determine what treatment works best. “At the moment, we don’t have any satisfactory modality of treatment for thalamic pain,” he says.

Recently honored with the Department’s Jack Hirsch Award for Outstanding Academic Achievement, Panju is excited about the future.

He is leading the development of an innovative new adult outpatient clinic now taking shape at McMaster. The McMaster Academic Ambulatory Care (MAAC) unit, slated to open next year, will be a “mini Mayo Clinic” allowing patients with complicated medical conditions to see several specialists during a single visit.

Says Panju: “We will house all the sub-specialties of medicine under one roof. It will be a huge step forward in our ability to train the physicians of tomorrow to manage multi-system chronic medical conditions.”

**MICHAEL G. DeGROOTE NATIONAL PAIN CENTRE**

**Anyone who has known** chronic pain knows the relief that painkilling drugs can bring. Yet there is a fine balance between managing pain and the potential threat that prescription painkillers can bring, including the risk of addiction and overdose, even death.

The Michael G. DeGroote National Pain Centre (NPC) continues to lead the charge in pain education and other activities supporting implementation of best practice guidelines for the safe and effective use of opioids to treat patients with chronic, non-cancer pain.

NPC director Dr. Norman Buckley is co-leading a national initiative to implement an educational strategy for dealing with prescription drug misuse.

“We will be lobbying educators in healthcare professional fields, from undergraduate right through post-graduate training and continuing education to enhance skills and abilities in the fields of pain and addiction.”

Getting information to the public is also a key goal. In addition to conference presentations and abstracts, NPC hosted a Canadian Institutes of Health Research (CIHR) Café Scientifique public forum on the use of opioids for the public. It also facilitated transfer of the opioid manager, a patient management guide, to six electronic medical record platforms.

Says Buckley: “We are getting information out and implementing it in practice.”
When Michael G. DeGroote announced his historic gift to McMaster in 2003, he hoped it would have a meaningful impact on advancing discoveries in research and medical education in Canada and internationally.

It has done all that and more, fuelling a game-changing, “go-get-em” strategy for recruitment that has brought the world’s best and brightest talent to every corner of the Faculty. The centerpiece of this “seize the day” approach is a matching program for endowed chairs, an initiative of the Faculty of Health Sciences Development Fund that was created with a $25 million endowment from Mr. DeGroote.

In 2007, Dr. Jacques Tittley benefited from this program with his appointment as inaugural holder of the Beamish Family Foundation Chair in Peripheral Vascular Surgery.

“The Beamish family’s gift could not have come at a better time,” he recalls. “Vascular surgery was undergoing dramatic changes. New minimally invasive techniques were giving longtime sufferers of peripheral artery disease a new lease on life.”

This exciting revolution brought with it the need for additional training and credentialing.

“The resources provided by the Chair allowed us to ramp up our vascular surgery program,” says Tittley. “We have funded new research, sent trainees and established surgeons abroad to learn new techniques, and encouraged countless local initiatives.

McMaster remains at the forefront of academic productivity and is considered a national leader in these extremely complex techniques.”

New developments include a major national initiative to establish Canadian standards in radiation safety during endovascular procedures, and creation of a smart phone application (App) that will provide essential medication information for various cardiovascular conditions.

Cardiovascular disease is the focus for Dr. Sonia Anand, holder of the Heart and Stroke Foundation of Ontario/Michael G. DeGroote Chair in Population Health. Her research is focused on the environmental and genetic causes of early cardiovascular risk factors, including type 2 diabetes and cardiovascular disease among high-risk, diverse ethnic groups.

“Almost two-thirds of deaths in Canada are due to chronic diseases,” says Anand. “And South Asians are at a higher risk of suffering coronary artery disease than the general population.”

Her study involves screening 1,000 South Asians in the Greater Toronto area, and is the first of its kind in Canada.

Anand is also co-leading the Canadian Alliance for Healthy Hearts and Minds, an initiative that will involve 30 researchers across Canada collecting health information risk factors from more than 10,000 individuals, including 2,000 Reserve-based Aboriginal people.

“We hope to learn how ethnicity, lifestyle and environmental factors impact the function of our heart, brain and blood vessels,” says Anand. “Because of Canada’s diverse geography and populations, this research will be unique internationally.”

This year, Dr. Michael McGillion was recruited to the School of Nursing (SON) to assume the Heart and Stroke Foundation/Michael G. DeGroote Chair in Cardiovascular Nursing.

The assistant professor’s research focuses on persistent pain in cardiac populations, and is unique in its integration of pain science with cardiovascular science.

“Tens of thousands of Canadians seek emergency services and/or are referred for diagnostic coronary angiography each year to investigate sources of chest pain,” says McGillion. “Of these, a considerable percentage suffers from persistent cardiac pain which is generally poorly understood and difficult to treat.”

With colleagues across Canada, and funding from the Canadian Institutes of Health Research, McGillion is developing a decision support tool to help patients with refractory angina, a particularly challenging form of persistent cardiac pain. This tool is designed to help sufferers understand their treatment options and make informed health care choices. “We are now pilot testing this tool in collaboration with eight cardiovascular centres in Canada,” he says.
McGillion succeeds Dr. Heather Arthur, who has held the chair since its inception in 2003. She was the first nurse scientist in Canada to be named a cardiovascular chair. Recently, she became the first woman, and the first nurse, to receive the Terry Kavanagh Prize, a national research award from the Canadian Association of Cardiac Rehabilitation.

During her 10 years as Chair, Arthur became internationally known for her research in two areas: access to acute and rehabilitative cardiac services, and behaviour cardiology. Her research funding increased to over $10 million from $1.2 million, and her scientific publications increased to more than 100 from 27.

“The Chair signifies the important contribution that nurse scientists can make in the discovery and uptake of new knowledge that improves health care,” she says.

Arthur also played an important role in educating the next generation of scientists. She has supervised 20 graduate students, several of whom now hold faculty positions at Canadian and American universities and are expected to have a major impact on future cardiovascular research.

For Dr. Mark Loeb, the Michael G. DeGroote Chair in Infectious Diseases is the culmination of an odyssey that puts him right where he wants to be. It began with a small grant from Michael G. DeGroote for a pilot study on dengue hemorrhagic fever that evolved into a $10 million grant from the National Institutes of Health (NIH) for an international research project on the disease.

“The data from that pilot study was instrumental in our ability to secure a large contract with the NIH that became the Dengue Population Genetics Program involving Honduras, Colombia, Nicaragua, Burma, Vietnam and Sri Lanka with partners at the University of Berkeley and the University of Washington,” he recalls.

The five-year study has been investigating genetic variations that predispose people to dengue, a disease emerging as a global public health threat. DeGroote funding has also supported the Chair’s study on the role of Vitamin D in reducing flu in Vietnamese children, a finding that could one day benefit Canadian children.

Dr. Paola Muti, holder of the ArcelorMittal Dofasco Chair in Experimental Cancer Therapeutics, is boldly exploring novel cancer prevention strategies to see if cancer can be stopped in its tracks before it starts.

She is investigating the potential of Vitamin D and other natural substances, such as melatonin – used by insomniacs to induce sleep – to halt the growth of cancer cells. Her study involves giving women scheduled for breast cancer surgery Vitamin D and melatonin, then monitoring them for tumor growth. If it can be shown that the tumors reduce their proliferative activity, her research could lead to larger international cancer prevention trials.

“I can think of no more worthy goal than the pursuit of good health and the best health care.”

– Michael G. DeGroote

Muti is also conducting research on biomarkers (molecules), the biological fingerprints that indicate who is at risk for specific diseases, such as breast cancer, diabetes, heart disease and dementia. She anticipates new answers from biomarker research to predict risk of breast cancer in still healthy women will soon be available for breast cancer patients.

“This is very innovative research that would not be possible without financial support from the Chair,” says Muti.
In five years since the first Michael G. DeGroote Fellowship Award was given out, $1.3 million has been tapped to fund the research programs of 17 postdoctoral students at McMaster University. They represent the best and brightest of their generation, young scientists on the cutting edge of some of the most groundbreaking discoveries of our time.

This year’s recipients are making their mark in everything from healthy aging and stroke prevention to anti-fungal therapies and the eradication of deadly bacteria.

Dr. Alexander Crizzle in the School of Rehabilitation Science has received a clinical research award to continue his work in aging, health and well-being. He is looking at ways to improve the design of vehicles to minimize falls among older adults.

The project team includes a rehabilitation scientist, engineer, gerontologist, biomechanist and sociologist. Together, they are studying how characteristics such as height and weight, as well as physical function such as balance, interact with vehicle design features such as car seats to impact an older person’s ability to get in and out of a car.

“Driving is such a big part of people’s lives. When they lose their licenses or stop driving, it can have a devastating effect on their lifestyle. Older adults, especially, can become socially isolated and no longer engaged in the community,” says Crizzle, who completed his graduate work at the University of Waterloo.

Dr. Ryan Lamers, a biochemistry postdoctoral researcher and member of the Michael G. DeGroote Institute for Infectious Disease Research (IIDR), is using his basic biomedical science award to study antibiotic resistance in the bacterium Pseudomonas aeruginosa. P. aeruginosa is a major cause of lung damage in cystic fibrosis patients and one of the leading causes of hospital-acquired infections. It is resistant to most conventional antibiotics.

“This bacterium is one of the top three pathogens that infect people in hospitals. We need to stay ahead of it and find new avenues to treat these infections,” says Lamers, who earned his PhD at the University of Central Florida.

Lamers was recently awarded two-year CIHR and Cystic Fibrosis Canada Fellowships, and the 2013/14 Cystic Fibrosis Canada-Kin in Canada Fellowship, an honorary award given to the highest ranked applicant in the competition. He is currently screening a library of small molecules to determine which ones, in combination with common antibiotics, will kill the bacterium.

Cardiac imaging is the focus of Dr. Darryl Leong’s work, which is being...
funded by a clinical research award. The post-doctoral fellow with the Population Health Research Institute (PHRI) became interested in a developing technology called speckle-tracking strain while he was doing his postdoctoral training at the Leiden University Medical Center in the Netherlands.

The technology allows for an evaluation of the heart muscle, its function and how damaged it might be from various diseases, such as high blood pressure and heart attacks. While the technology is mainly used for research, he says its applications are growing.

During his PhD studies, Leong became aware of Dr. Jeff Healey’s discovery at McMaster that a large number of strokes of unknown origin were related to an irregular heart rhythm. That work and the reputation of the PHRI were enough to convince Leong that McMaster was where he wanted to be. He is currently measuring atrial strain in patients with pacemakers, in the hopes of predicting who may be prone to stroke.

“Stroke is disabling, and can be fatal,” says Leong. “Preventing it is very important from a public health perspective.”

Dr. Nicole Robbins, a postdoctoral fellow in the Department of Biochemistry and Biomedical Sciences and the IIDR, is employing high-throughput screening and chemical genetic experiments to look for novel combinations of anti-fungal therapies.

The basic biomedical award recipient is combining current antifungal compounds at sub-inhibitory concentrations with 5,000 other drugs used for other purposes to see whether they can kill fungal pathogens. Invasive fungal infections are a leading cause of human mortality worldwide.

“This systematic approach to screening tens of thousands of combinations isn’t being done with fungal pathogens, at least to my knowledge, anywhere else,” says Robbins. “I feel very fortunate to have the infrastructure and equipment that we have here at McMaster to do this kind of research.”

The awards are funded through a portion of the Faculty of Health Sciences Development Fund, a $25-million endowment from Mr. DeGroote. Successful candidates are awarded $50,000 ($40,000 from the DeGroote endowment matched by $10,000 from their supervisor).
Clinical news

MICHAEL G. DEGROOTE PEDIATRIC INTENSIVE CARE UNIT

Seven and a half weeks is a long time in a three-year-old’s life. It’s an even longer time for a mother who won’t leave her daughter’s side for fear of losing her.

That’s how long little Savannah Herbert lay in one of the beds in the new Michael G. DeGroote Pediatric Intensive Care Unit (PICU). Machines surrounded her to keep her alive. They took over where her body could not.

Only weeks earlier, her mom Brandy had suspected something was wrong.

By the time Savannah got to that bed, cancer was compressing her liver, it was wrapped around the aorta to her heart, and it had encased her left kidney. Neuroblastoma was stealing Savannah’s life.

“She wasn’t expected to make it for long,” Brandy said later. “The Mac team did an amazing job.”

The PICU is a 12-bed, state-of-the-art intensive care unit for children located at McMaster Children’s Hospital. It opened in 2012, thanks to a generous $10 million donation from Michael G. DeGroote and government financial support.

The rooms are all private and spacious. Two lounges, an overnight family room and one suite with an adjoining room ensure families remain an active part of their child’s care. Each room also has a family area with space to store a small amount of family needs, such as a change of clothes.

All of this is important, notes Brandy, who lived in that room alongside Savannah during her daughter’s time there. The geography of the room also allows enough space for best care. In Savannah’s case, equipment used to keep her breathing and alive took up volumes of space.

Brandy wonders how much more difficult it must have been for health care staff to give the best care in the previous smaller, cramped rooms. “They could barely fit the equipment in the new rooms. I have no idea how they did it in the old space and still give effective care.”

But the best care is what it’s all about: “The Mac PICU team is just amazing,” gushes Brandy. “They communicate with parents so you know exactly what’s going on and when, and they’re responsive to every situation.”

Savannah made it out of hospital early this year. She’s getting better and stronger every day, and more able to keep up with her brother Cody, and sister Dakota, both older than her.

“A lot of time it’s hard to believe she’s sick,” Brandy says. But she is. The cancer is still there. So Brandy focuses on the positive, and is thankful for the care of the PICU team.
A boost in academic research activity and a growing stroke fellowship program are key accomplishments for Dr. Robert Hart in his two years at McMaster University.

In 2011, the professor of medicine at McMaster University was recruited for his expertise in randomized trials, vascular neurology and leadership in stroke research as the inaugural holder of the Michael G. DeGroote Chair in Stroke Prevention. He is also a senior scientist of the Population Health Research Institute and co-director of the McMaster/Hamilton Health Sciences Stroke Fellowship Program.

He has since recruited Dr. Michael Sharma, a highly regarded stroke neurologist from the University of Ottawa, who joined the stroke program in January, 2013. Sharma is now an associate professor of medicine in neurology at McMaster and a scientist at the Population Health Research Institute. His focus is on clinical trials to prevent “silent strokes” – strokes that are not recognized as such by the victim and that are even more common than recognized strokes.

“Stroke is a disabling disease and the second leading cause of death globally.”

– Dr. Robert Hart

MICHAEL G. DeGROOTE CHAIR IN STROKE PREVENTION

When Dr. Demetrios Sahlas assumed the Michael G. DeGroote Professorship in Stroke Management five years ago, he knew he had his work cut out for him.

Hamilton was well known for its clinically superior stroke program, based at Hamilton General Hospital, “but we were making no significant contribution to the body of scholarship in stroke management and vascular health,” says the associate professor of medicine.

Sahlas made it his goal to develop a climate of investigator-driven clinical research that would advance best practices in stroke prevention, diagnosis and treatment and fulfill Michael DeGroote’s vision for a world-class stroke centre at McMaster.

His efforts are paying off. From one clinical nurse coordinator working part-time on pharmaceutical company-sponsored research projects, there are now three coordinators overseeing half a dozen investigator-driven projects. Researchers include not just neurologists but nurses, occupational therapists and other allied health professionals.

One of his proudest initiatives is the creation of the region’s first transcranial doppler service (TDC), which uses portable ultra-sound machines to detect impeded blood flow to the brain, a warning sign for ischemic stroke. The first TDC in the province to train nurse practitioners to operate the machines, it has attracted international attention as a model that could lead to more rapid diagnosis and improved patient outcomes.

For Sahlas, achieving stroke best practice through knowledge translation is paramount. His concern over lengthy screening times for patients presenting at stroke prevention clinics led to the development of a test that can measure cognitive impairment in half the time. Worried that too many stroke patients were not being weighed before receiving a common clot-busting medication where dosage is tied to weight, he decided to investigate. He found that patients receiving higher than recommended doses for their weight had poorer functional outcomes and were at risk of brain hemorrhage.

“We now have a dedicated stretcher capable of accurately measuring a person’s weight that we use for every stroke patient being evaluated for thrombolysis.”

Sahlas says none of this work would be possible without the generosity of DeGroote. “His gift catalyzed the development of a research infrastructure that provided the momentum upon which the entire stroke program is being built. It really kick-started the whole thing and put us on the radar.”

MICHAEL G. DeGROOTE PROFESSORSHIP IN STROKE MANAGEMENT
The Michael G. DeGroote Gift

Following the agreement with the DeGroote family, the total value of the Michael G. DeGroote gift was allocated into two main areas: a $64-million endowment fund supporting education, health care and medical research in perpetuity, and a $41-million capital fund that supports the building of Michael G. DeGroote Centre for Learning and Discovery, the Michael G. DeGroote Institute for Pain Research and Care and Michael G. DeGroote Pediatric Intensive Care Unit.

The endowment portion of the DeGroote gift created and supports three research institutes: the Michael G. DeGroote Institute for Pain Research and Care, the McMaster Stem Cell and Cancer Research Institute and the Michael G. DeGroote Institute for Infectious Disease Research. The endowment also supports several endowed chairs and a professorship, along with the Michael G. DeGroote Faculty of Health Sciences Development Fund.

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Together, advancing health through learning and discovery

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