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**THE FUTURE IS
IN YOUR DNA**



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★ THE FUTURE IS IN YOUR DNA



IF YOU'RE A REGULAR READER OF *FOCUS* YOU'LL NOTICE THINGS ARE A LITTLE DIFFERENT FOR OUR SPRING 2011 ISSUE. The title and the overall design have been updated. It seems appropriate for what is a futuristic issue. Our feature on DNA (pages 12 to 14) traces McGill's journey from the dawn of genomics to the current

day, and looks into the promise that personalized medicine holds for the breakthroughs of tomorrow.

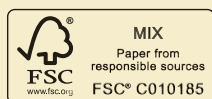
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★ WEB EXCLUSIVES

OUR WEB-EXCLUSIVE CONTENT INCLUDES THE STORY OF ALUMNUS JOSEPH HANAWAY, BA'56, MDCM'60, WHO DEDICATED COUNTLESS HOURS TO HELPING MCGILL RESTORE THE BELLS AND CLOCKS AT THE ICONIC RODDICK GATES. Also read about the intersection of research and clinical practice at the Research Institute of the McGill University Health Centre, including an interview with director **Vassilios Papadopoulos**. And learn from **Antonia Arnaert**, associate professor in Nursing, about Telehealth, which is bringing state-of-the-art care to Quebec's regions.

<http://publications.mcgill.ca/medinfocus/>



ERRATUM: The fall 2010 issue of In Focus contained an error in the story "At Home in Quebec" on page 19. Psychology was incorrectly referenced as a residency specialty. We apologize for this error.

THE FUTURE *is* IN YOUR DNA

The arrival of star genomicist Mark Lathrop at the McGill University and Génome Québec Innovation Centre couldn't have come at a more perfect moment.

Auspiciously, the celebrations were held on the tenth anniversary (almost to the day) of *Nature's* first publication of the human genome sequence. Despite the commentary from naysayers, that historic event undoubtedly changed medicine forever. Via genomics, medicine will become a more personalized, predictive and preventive science. McGill is better positioned than ever to lead the field.

Last month, *Nature* published a ten-year follow up to its 2001 report, telling readers, "The best is yet to come." Just how optimistic do we have a right to be about genomics?

It's true that progress in genomics has not been as swift as many would like. We have not found "the cure" for cancer; chronic diseases like stroke and heart disease are still leading killers around the world; our health care systems are overburdened. In a world of finite resources, genomics requires a big investment. A state-of-the-art gene sequencer – the workhorse of a world-class facility like the Innovation Centre – can cost close to a million dollars. But if we don't use the map that these sequencers will provide, we're telling doctors and nurses that both the chronic and well-known medical mysteries they see on the wards will remain unsolved. We cannot accept such a proposition.

What is beyond doubt is that genomics has already made itself indispensable. Cancer drugs, for example, are now commonly tested against the responses of particular individuals with particular genes. This ensures targeted therapies that improve a patient's prognosis. Meanwhile, genomicists can start to build a bigger picture of how variance across individuals and populations can help match the right drugs to the right people.

With every passing year, the evolving technology of genomics accelerates progress, and genomics is an area where progress can be measured exponentially. Bio-ITWorld.com reported this year that some life sciences companies are already charging under \$10,000 to sequence a human genome. When James Watson, co-discoverer of the structure of DNA, had his genome sequenced in 2007, the cost was \$1 million. The race for the \$1,000 genome is on.



Paul Fournier

▷ Principal and Vice-Chancellor Heather Munroe-Blum, Quebec Minister of Economic Development, Innovation and Export Trade Clément Gignac, genomicist Mark Lathrop, CEO & President of Génome Québec Jean-Marc Proulx, and Vice-Principal (Health Affairs) and Dean of Medicine Richard I. Levin at the McGill University and Génome Québec Innovation Centre.

With a complete genomics "map" of every individual becoming widely accessible, you can imagine a day when DNA tests are as ubiquitous and practical as a doctor's stethoscope, perhaps more so. In such an environment, genomics requires an ongoing investment in research, education and infrastructure. McGill and Quebec have jointly proclaimed that the Innovation Centre will be one of the "Grand Central Stations" of genomics. This means that we will help invent the future of health care and health sciences.

Nature has it right. The best of the genomics era is yet to come. I am delighted that our University is able to enhance its leading role in unlocking the medical mysteries of this era for the benefit of Quebec, Canada and the world.

RICHARD I. LEVIN, MD

Vice-Principal (Health Affairs)
Dean, Faculty of Medicine
McGill University

NEW PROGRAM FOR CHANGING SYSTEM



Owen Egan

Occupational therapists Jenne Saunders and Carlie Dejoie are ready to apply their MSc training.

First MSc graduates in PT and OT launch their careers.

Canada's health care system is changing. In a 2004 paper, the Canadian Physiotherapy Association noted that in the course of just two years, no less than three reports examined emerging pressures on health care from a provincial perspective* and two tackled the issues from a national perspective.** The association's paper also acknowledged the growing influence on their profession of consumer demand, the need for better primary care, and demographic shifts across the country.

Change is the norm in occupational therapy, too. "Occupational therapy has expanded from traditional hospital settings to home and community care," the Canadian Association for Occupational Therapists notes on its website. The proportion of OTs in private practice has exploded – to 25%, up from 3% in 1990. An aging population has made increasing demands on OT practitioners, while improved accident survival rates result in more clients requiring help in adjusting back to work and daily life.

Meanwhile, the science behind both professions continues to evolve. "The knowledge base has changed so much," says Bernadette Nedelec, director of McGill's occupational therapy program. "We need to have graduates who are much more self-directed."

Nedelec and her colleague Judith Soicher, BSc(PT)'90, MSc'00, PhD'09, director of physiotherapy, spoke in similar terms about the varying factors that have gone into shaping the new MSc Applied programs at the School of Physical and Occupational Therapy. In fall 2010, the first-ever McGill MSc students from OT and PT wrapped up their studies – officially becoming the Class of 2011. *Focus* had a chance to catch up

with the students just before they embarked on their careers. The excitement was palpable. They are entering fields in which unemployment is practically unheard of and where the diversity of the jobs matches the diversity of the graduates themselves.

Jenne Saunders, with a degree in French literature, Carlie Dejoie, BSc'07, with a bachelor's in neuroscience and psychology, and Zachary Boychuk, BA'04, with a bachelor's in psychology, spoke on behalf of the occupational therapy cohort.

"We are very client-centred and we have a holistic approach," explained Carlie. "As a graduate of this program you have a more solid background in the literature. It's good to make a transition between the theory and the practice."

Vanessa Foucher, BEd'07, who studied kinesiology, Krista Bulow with a bachelor's in exercise and sports science, and Jennifer Rosen, BSc'08, whose degree is in anatomy and cell biology, spoke about their experience in physiotherapy.

"I felt that the diversity brought our class together," said Krista. "We found out what everybody's strengths were, what everybody's weaknesses were, and we all came together and helped each other."

Judith Soicher is confident that as the graduating class heads out into Canada's health care system, students have been equipped with the "essential building blocks for practice." The most important of which is – surely – an ability to adapt to an ever-changing world. **{ LAURENCE MIALL }**

*Clair, Mazankowski, Fyke (2001)

**Kirby, Romanow (2002)

REWARDING LEADERSHIP

“The level of teaching and research in the School of Communication Sciences and Disorders has always been impressive,” remarks Karen Evans, MSc’87.

With impressive teaching and research credentials of her own, Evans was deservedly selected for the School’s 2010 Distinguished Award for Professional Leadership.

Among her accomplishments over the past 25 years, she helped develop several key programs in England as well as Canada for children with speech difficulties, including a cueing system to reinforce sounds; she played a role in establishing the Montreal Fluency Centre, a not-for-profit pediatric clinic; and she created the semantic parsing method for developing sentence comprehension in language-impaired children, which led to further work with neurologically impaired populations.

One of her more challenging but also rewarding areas of work is in childhood apraxia of speech. This disorder – characterized by severe motor speech difficulty that gravely affects speech production – requires an intensive, individualized therapy approach. “It is challenging to follow this literature, to

distill the clinical best practices, and then develop treatment practices that work,” she says.

Crediting her professional success in part to a solid education and exceptional work opportunities, she is now giving back by guiding the next generation of scholars and practitioners. “I have been fortunate in my career to have wonderful mentors, and I want to pass that on.”

Coming to McGill as a mature student, having already practised for seven years, Evans had an altogether different perspective. “As clinicians in the first years of practice, we often feel that if we knew then what we know now, we would have studied differently,” she says. “It was particularly exciting for me, midway through my career, to pursue research training at one of the best universities in our field.”

Evans received her award at a special ceremony held in November at the School. **{ ANNETTE MAHON }**

INAUGURAL CHAIR IN PSYCHOSOCIAL ONCOLOGY

An expert in the psychosocial aspects of cancer, Carmen Loiselle has just added a new title to her academic repertoire – inaugural holder of the Christine and Herschel Victor/Hope & Cope Chair in Psychosocial Oncology.

Established in 2008 through a generous donation by long-time McGill supporters Christine and Herschel Victor, the chair will allow Loiselle to extend her work on treatment protocols that consider the entire continuum of cancer care.

“We are now aware of the tremendous role that physical, psychological, social, spiritual and financial aspects play in the lives of cancer patients, their families and friends,” says Loiselle, who is also director of the McGill University Oncology Nursing Program and associate professor at the School of Nursing. “One important aspect is living with the aftermath of cancer treatment, where longer-term effects are often underestimated.”

Many aspects of the cancer experience have yet to be fully explored, such as the existence of patterns of coping mechanisms; identifying what support services are most utilized and cost-effective; the relationship between stressors and

cancer progression; how families of survivors adapt; and assessing the health outcomes of alternative therapies, such as meditation and acupuncture.

The new chair will also be closely aligned with McGill’s already successful Psychosocial Oncology Research Training Program, serving as a vital tool to attract and mentor promising clinicians, graduate students, postdoctoral fellows and other investigators.

“McGill is a recognized leader in research related to the psychosocial aspects of cancer care,” says Loiselle. “Thanks to the creation of this chair, we can continue to have a profound effect on this rapidly growing field and give those who survive cancer a better quality of life and sense of hope for the future.”

{ ANNETTE MAHON }

TACKLING DEMENTIA AND ALZHEIMER'S

“Dementia is already a public health crisis, one that could take on catastrophic proportions in the coming decades if we don't find a way to prevent it...”
–Breitner

Canadians are living longer. That's the good news. The downside is that chronic, non-communicable diseases are becoming increasingly prevalent as our population ages. Enter John C.S. Breitner, the inaugural holder of the newly created Pfizer Canada Professorship in the Prevention of Dementia, charged with tackling one of Canada's most complex medical challenges.

“Dementia is already a public health crisis, one that could take on catastrophic proportions in the coming decades if we don't find a way to prevent it,” says Breitner.

By 2050, projections suggest that more than 1.3 million Canadians will be diagnosed with some form of dementia, up from 460,600 today. A new case emerges in Canada every five minutes. The Alzheimer Society of Canada estimates that the economic burden of dementia will double every decade, increasing from \$15 billion in 2008 to \$153 billion in 2038.

Breitner, who joined McGill in August 2010, trained at Harvard, the University of Pennsylvania and Johns Hopkins. Currently Director of the Centre for Studies on the Prevention of Alzheimer's at the Douglas Mental Health University Institute, he previously headed the University of Washington's Division of Geriatric Psychiatry and directed the Geriatric Research Education and Clinical Center at the VA Puget Sound Health Care System.

The new professorship, created with a generous gift of \$2 million from Pfizer Canada and a substantial investment from McGill, will support Breitner's work in identifying and measuring signs of dementia before symptoms appear and in testing treatments that slow its progression. The Pfizer professorship was unveiled at an event held December 7 at McGill's Life Sciences Complex, during which Vice-Principal of Health Affairs and Dean of Medicine Richard I. Levin talked of the challenge of entering unmapped scientific territory.

“McGill is recognized internationally in Alzheimer's and age-related diseases, and with this additional and generous support from Pfizer Canada, we are eager to break new ground,” said Levin. **{ ABBY NICHOLS }**

CONTINUING THE CRUESSES' LEGACY

Thanks to the newly created Richard and Sylvia Cruess Chair in Medical Education, McGill is better positioned than ever to attract world-class scholars and talented students, and to heighten the awareness of medical education both locally and internationally.

“This new Chair will ensure that the art and science of pedagogy, which has begun to make medical education so effective, will continue to have an impact at McGill and beyond,” says Sylvia Cruess.

There had been discreet meetings and phone calls, and a sense of mounting excitement as this feat of fundraising and planning finally came together. “When we received the first gift towards the Chair, my first inclination was to run and tell [the Cruesses],” says Yvonne Steinert, director of the Centre for Medical Education at McGill. Steinert resisted and when the announcement was finally made to the remarkable couple that a chair had been established, they were “flabbergasted” and overjoyed. “If you were to ask us how we would like to be remembered, a chair in medical education would be at the top of the list,” says Sylvia Cruess.

Three sets of donors made it all possible, Deirdre Stevenson and Robert Stevenson, BA'49, BD'61, Herbert Black and the Molson Foundation. The Cruesses had been at the Centre for Medical Education since 1995 when they stepped down from their respective leadership positions – he as dean of the Faculty of Medicine at McGill, and she as director of professional services of the Royal Victoria Hospital. They hadn't intended to embark on a whole new career, but an interest in defining professionalism in medicine led to 15 years of research into the subject, multiple publications and lectures around the world. Their research on professionalism complements the work being done at the Centre on teaching and evaluating medical education.

“They are role models to every single one of the core faculty, mentors to many, and between the two of them, they have collective wisdom that really is invaluable,” says Steinert.

“We've come to realize that we have to have reliable, valid and reproducible methods of assessing teaching, and that comes out of education, it doesn't come out of medicine or surgery,” says Richard Cruess “Medical education needs to be supported and to have a high profile.” **{ MARIA TURNER }**

NEW MEDICINE CHAIR HONOURS PHIL GOLD

When Vassilios Papadopoulos, McGill professor and director of the Research Institute of the McGill University Health Centre (RI MUHC), learned that he had been named the Dr. Phil Gold Chair in Medicine, he was deeply touched.

The Chair, one of the first of a series created jointly by McGill and the MUHC, honours the work of Phil Gold, BSc'57, MDCM'61, MSc'61, PhD'65, professor of Medicine, Physiology and Oncology and executive director of the Clinical Research Centre at the MUHC. Gold served as physician-in-chief at the Montreal General Hospital and chair of the Department of Medicine at McGill from 1985 to 1990. He was also the inaugural director of what is now the Rosalind and Morris Goodman Cancer Research Centre.

Gold is not only an inspiration for Papadopoulos, he is also an esteemed colleague. "We have very close interactions because he's head of the clinical research centre at the MUHC," says Papadopoulos. "He is a wonderful individual and a wonderful advisor." As the Dr. Phil Gold Chair, Papadopoulos will continue to strengthen the ties between the academic research centres and the hospitals, and facilitate the recruitment of the best and brightest clinicians and researchers.

The new position will also allow Papadopoulos to continue his research in pharmacology and understanding diseases related to abnormalities in steroid synthesis, on top of his work as director of the RI MUHC.

Papadopoulos was instrumental to the Canada Foundation for Innovation's landmark 2008 grant of \$100 million to build and equip the RI MUHC at the Glen Campus. He has published over 200 peer-reviewed manuscripts, written two books and contributed chapters for 40 more. He currently holds three grants from the National Institutes of Health and two from the Canadian Institutes of Health Research as principal investigator and is an elected member of the National Academy of Medicine in France and a fellow of the American Association for the Advancement of Science in the United States.

{ MARIA TURNER }

OPEN HOUSE AT THE GOODMAN CANCER RESEARCH CENTRE

The November 22 open house gave donors a chance to see first-hand some of the Centre's recent progress.

It was also an opportunity for the Faculty of Medicine to give thanks for the generous contribution of \$100,000 from the estate of the late André Aisenstadt.

"These gifts are world-changing for us," the Centre's director Michel Tremblay told a gathering of about 60 people. "The Centre will be at the forefront of the next generation of personalized medicine."

In her remarks, Rosalind Goodman, BA'63, noted that contracting cancer "is not a death sentence, and treating it is not an impossible dream." She spoke from personal experience. Doctors gave Rosalind Goodman only five years to live when they diagnosed her with lung cancer, but that was more than four years ago, and her health thus far has been strong and the disease has been kept in check.

"I don't think anyone can tell you something like that – how many years you have left," she said. "I'm not surviving with cancer, I'm thriving with it."

Doctors also diagnosed the Goodmans' son Jonathan with Hodgkin's lymphoma some 20 years ago. At the time, he had to travel to Boston for treatment, but such trips are no longer necessary, Mrs. Goodman said. "I want our scientists to act as



Nicolas Morin

Nahum Sonenberg (centre) joined Michel Tremblay in explaining the progress being made at the Goodman Cancer Research Centre. Researcher Tommy Alain (left) and Giancarlo Mirabelli (right) from Imprimerie Groupe Deux Printing, a Centre sponsor, look on.

a magnet to attract and keep the best brains in Montreal. That's why we gave our gift, to keep the world-class scientists here."

Dean Richard I. Levin, the evening's emcee, summed up the spirit of the open house with his concluding remarks, paying tribute to the Goodman family and all the Centre's donors.

"Thank you for all you do," he said. "Your constant striving to give back to the community does so much for the cause of medicine and for the improvement of the human prospect."

{ BILLY SHIELDS }

MAKING HEALTH CARE SUSTAINABLE

“It’s essential that universities **modify their course and training offerings** to service the huge demands that health care delivery requires.”

Last fall, McGill Chancellor H. Arnold Steinberg, BCom’54, LL.D.’00, made an extraordinary gift of \$2.4 million to kick-start a major interdisciplinary research and teaching program, known as the Healthier Societies Initiative.

Based at McGill’s Institute for Health and Social Policy, the five-year, cross-faculty effort will examine what works – and what doesn’t – in health systems across the world’s leading economies in order to develop more effective and affordable health care delivery.

Drawing on the expertise of top researchers from McGill’s faculties of Medicine, Arts, Science and others, a key aspect of the initiative will be teaching a new generation of leaders to translate research findings into public policy change. Two major conferences will be convened over the five-year period, bringing together academics, stakeholders and policy makers from around the world.

When his gift was announced in October, Steinberg noted, “It’s increasingly clear the medical delivery system is on a serious collision course. We’re well past the point of being unsustainable.” A lifelong champion of health care causes, Steinberg added, “It’s essential that universities modify their course and training offerings to service the huge demands that health care delivery requires.”

The combination of research and teaching sets the McGill initiative apart among efforts to tackle the problem of spiralling health care costs that eat up ever greater chunks of government budgets. “Health care costs have accelerated in affluent countries, rising far faster than GDP growth, but gains in population health have not kept pace,” noted Jody Heymann, founding director of the Institute for Health and Social Policy, who will lead the new initiative. “As health care expenditures rise, health inequities are likely to grow and the gap in access to medical care will increase.”

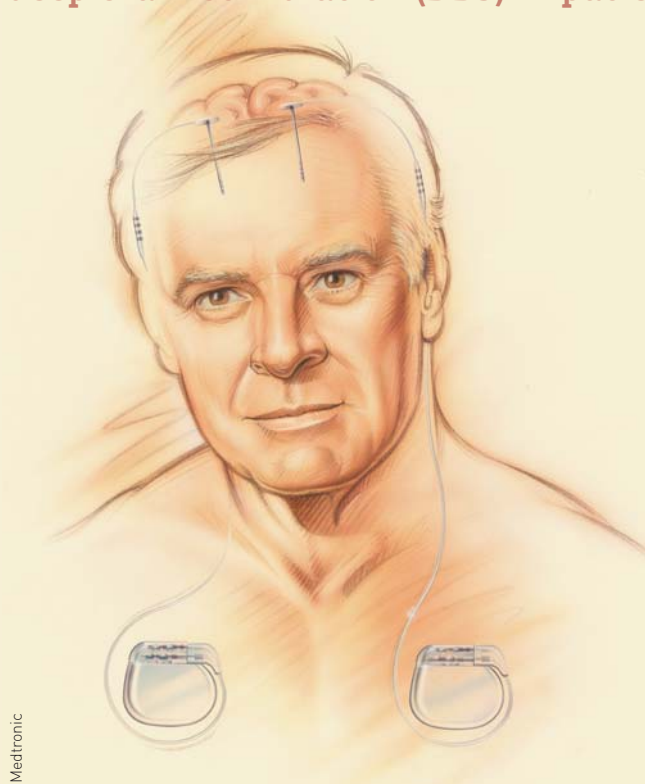


↳ Jody Heymann

The Healthier Societies Initiative is intended to have an impact beyond the initial five years – sparking long-term changes in technology, training and program development. Richard I. Levin, Vice-Principal of Health Affairs and Dean of Medicine, called the initiative “an enormous step on the road to finding the best way to deliver health services to the population at large...which must be a shared responsibility with academic medicine.” { ALLYSON ROWLEY }

THE *power* OF DEEP BRAIN STIMULATION

For the past 15 years, Blair Ford, MDCM'85, has studied the application of deep brain stimulation (DBS) in patients with Parkinson's disease.



Medtronic

↳ Deep brain stimulators are implanted on both sides of the brain with connecting wires and batteries.

Due to tremor, stiffness or slowness, Blair Ford's patients often have difficulty performing even the simplest tasks, such as picking up a cup of water or writing legibly on a piece of paper. But relief can come with the flip of a switch for some Parkinson's sufferers. By electrically stimulating selected deep brain structures through implanted electrodes, symptoms of tremor, rigidity, stiffness, slowed movement and walking impairment can be dramatically relieved.

"Brain science has grown exponentially over the past two decades," says Ford, who is a professor of clinical neurology at Columbia University in New York City. "However, despite huge biomedical advances, the deepest workings of the brain remain beyond our understanding."

McGill was fortunate to welcome Ford to Homecoming 2010, where he presented his fascinating work at the annual Class of 1985 Seminar. Through a brief lecture and videos, attendees witnessed the dramatic results he has achieved.

Despite its powerful effect, DBS operates using a simple concept. In the brains of patients with Parkinson's disease, the circuitry controlling motor activity is disturbed by abnormal electrical activity. Using an electrode to stimulate these areas, it is possible to restore the electrical activity towards normal, and thereby reduce unwanted motor symptoms. Despite its proven effectiveness, however, DBS is not a cure for Parkinson's and is not recommended for certain patients, such as those with balance impairment, depression or memory problems.

Developed in France in the early 1990s, DBS has replaced all other forms of surgical intervention for Parkinson's disease. Supported by clinical experience and advances in neurosurgery, neuroimaging, biomedical engineering and neurophysiology, DBS has been used clinically in tens of thousands of patients worldwide. The procedure is currently being tested for other central nervous system disorders, including depression, Tourette syndrome, dystonia (a syndrome of twisting movements) and obsessive-compulsive disorder.

"From a scientific perspective, the idea of improving people's lives using implanted brain electrodes seems like science fiction. The practical reality is that many patients with Parkinson's experience dramatic relief from their symptoms and live better quality lives, thanks to DBS," says Ford.

After graduating from McGill, Ford pursued training in internal medicine and neurology, becoming increasingly interested in movement disorders. In 1989, he established Columbia University's Center for Movement Disorder Surgery, which has grown to become one of the busiest sites for this advanced treatment in North America. The Center's neurosurgeons perform approximately 60 deep brain stimulation implantations annually. Ford's research focuses on the long-term outcome of treatment and the effects on quality of life, with the goal of identifying those individuals most likely to benefit. In addition, he is currently conducting a clinical trial of gene therapy for Parkinson's disease.

So, what's on the horizon in neuroscience research? "A deeper understanding of how the brain works will eventually lead to effective treatment for damaged brain cells, for brain cancer and for brain degenerative diseases like Alzheimer's and Parkinson's," says Ford. "That is what the scientific community strives for." **{ ANNETTE MAHON }**

SERVING *more* PATIENTS *better* AT THE JGH

After more than 75 years of success, the Jewish General Hospital (JGH) faces a new set of challenges: a growing elderly population, a “baby boom” in the surrounding neighbourhood, an increasing volume of annual visits to the emergency room, and rapid changes in health care and health care technologies.

The hospital is responding to this changing landscape with the launch of the most ambitious expansion project in the JGH’s history: the development of an all-new hospital wing, Pavilion K. “This Pavilion will make substantial improvements possible in the quality of care for patients, families and visitors, while enabling staff to work at the peak of their expertise,” says Hartley Stern, executive director of the Jewish General Hospital and professor of Surgery at McGill University.

Plans for the new Pavilion began in the mid-2000s, under the direction of a small group, including then-executive director Henri Elbaz, architect Yael Harroche and director of Planning & Real Estate Development at the JGH, Philippe Castiel. “The needs of Quebec’s population are ever-expanding,” says Castiel. “We need to ensure that the JGH is ready to respond appropriately. To do so, we require more space.” In 2005, the JGH acquired a sizeable property adjacent to its current location and the planning process went into high gear. In June 2010, the hospital got the go-ahead from the Quebec government to begin building.

The Pavilion, which will face Légaré Street and occupy the land north of Cummings Pavilion and west of Pavilion H, will focus on critical care patients. The first phase of construction consists of a new emergency unit, scheduled to open in 2012. “Since the JGH must cope with one of the busiest emergency departments in Quebec, a new facility is essential to handle the growing numbers,” says Stern. Emergency room visits now total around 70,000 annually, nearly double the number the current department was built to handle.

The JGH serves a diverse patient population including nearly one-third of the city’s elderly population (aged 75 or over), and a high proportion of low-income patients. Residents from the surrounding community form one of the largest and fastest-growing immigrant neighbourhoods in Canada. Each patient group has specific needs. “In 2009-2010, there were



➤ Artist’s conception of Pavilion K. Illustration by Jodoin Lamarre Pratte

4,498 babies born at the JGH – more than at any other hospital in the province,” explains Stern. Subsequent phases of Pavilion K will therefore include neonatal facilities.

The Pavilion will also house new, more spacious operating rooms and bright, modern facilities for medical and surgical intensive care, coronary care and cardiology. Each patient room in Pavilion K will contain only one bed so the hospital can better safeguard against new forms of infection and to respect patients’ need for privacy and dignity. “We want our patients, staff and visitors to feel at ease to as great an extent as possible during their stay,” says Castiel. And patient rooms in the Intensive Care Unit and the Coronary Care Unit will also provide pullout couches to allow family members to spend the night.

“As impressive as this project is, it’s more than a new pavilion,” says Stern. “It’s a way of bringing major improvements to the health care system of this province and it will serve Quebecers extremely well for generations to come.”

{ MARIA TURNER }

TROPICAL MEDICINE: *alive and well* IN QUEBEC

“Tropical medicine is often associated with parasitic diseases in countries with humid climates and sweltering temperatures,” says Michael Libman, MDCM’85, director of McGill’s Division of Infectious Diseases.

“**B**ut that’s too simplistic to say. What we explore is a combination of diseases often originating from tropical latitudes, from widespread poverty, from areas rampant with parasites – which can mean in all kinds of places – and from certain cultural and traditional practices.”

Libman, who is also interim director of the J.D. MacLean Centre for Tropical Diseases at the Montreal General Hospital of the MUHC, knows first-hand the range of infectious diseases that migrate to Quebec from around the world. For example, in 2000, the province had a mild imported malaria outbreak with the arrival of several infected African refugees. Many of the Centre’s patients are travellers, professionals and volunteers involved in humanitarian work, as well as immigrants.

But infections can also originate from within the province. “A lot of our own First Nations and Inuit populations have what might be considered to be ‘tropical’ infections in the sense that they are parasitic in nature,” says Libman. He cites one case, in particular, of the culinary practices of the Inuit people of Nunavik in Quebec’s North, who often eat raw walrus meat. In recent years, it was discovered that this custom had been causing many Inuit to develop a disease called trichinellosis, which can cause abdominal discomfort, nausea, diarrhea, vomiting, fatigue and fever.

McGill and various collaborators developed an innovative trichinellosis prevention program in consultation with local health authorities and hunters. “We did a lot of work trying to describe what the disease looks like in the North and how we could prevent it by intervening in the way hunting was done and how meat was inspected before people consumed it,” says Libman. The intervention proved successful and helped curb what had become a low-level epidemic.

McGill’s research strengths in tropical medicine lie in diagnostics, more specifically, the exploration of new technologies to diagnose parasitic diseases that are notoriously difficult to identify. Another key focus of McGill’s Division of Infectious Diseases is the development of satellite training programs in tropical medicine, infectious diseases and parasitology. For instance, McGill researchers, together with colleagues from Norway and India, have successfully implemented locally based educational training in southern India.

Each year for the last five years, doctors – half from India and half from Western countries – have attended a course on tropical medicine in southern India. In addition to teaching

Indian doctors new approaches and techniques, Western doctors acquire first-hand knowledge of these diseases.

In operation for 30 years, the J.D. MacLean Centre for Tropical Diseases is a one-stop shop for prevention, diagnosis, testing and clinical care of tropical diseases. The Centre houses a day clinic for patients; a pre-travel clinic to educate and assess those leaving for tropical locales; a parasitology laboratory for analysis of pathogens that may arise in patients; and, most notably, the National Centre for Parasitology reference lab, where clinicians and researchers can access the latest knowledge and most advanced technology in laboratory diagnostics. “We operate as one team in one spot so that when research and clinical questions arise, no one has to go running and pull together collaborators from here or there,” says Libman.

J.D. MACLEAN – PAYING TRIBUTE

“As doctors go, there was nobody more dedicated to his patients,” says Michael Libman, director of McGill’s Division of Infectious Diseases. McGill’s renown as a leading clinical, laboratory and research hub in tropical medicine is thanks in a large part to the foresight and vision of one doctor, John D. MacLean. As a physician, he was a role model for generations of students who benefited from his tutelage. Through dedication and a genuine desire to serve patients, in 1980 he created the internationally recognized Centre for Tropical Diseases that bridges the divide between laboratory bench and bedside care.

Despite having no formal training as a researcher, MacLean’s contributions to tropical medicine were vast and had a direct impact on populations in other countries as well as Canadian immigrants and Native groups in the far North. He received countless requests from governments for advice, was invited to speak at the continent’s most prestigious medical schools and had manuscripts published in leading journals.

MacLean passed away in January 2009 at the age of 68. His influence lives on through the many colleagues he inspired to offer the best in medical care and to continually push the boundaries of medical science. **[ANNETTE MAHON]**

THE CONTINUING *evolution* OF HUMAN GENETICS AT MCGILL

It is 1957. Charles Scriver is a resident at the Children's Medical Center at Harvard. A woman brings in her four-month old daughter who is having seizures that do not respond to epilepsy medication. The distraught woman says tearfully, "It's happening again." Her first child died of a mysterious convulsive disorder and she is worried her second child will meet the same fate.



Michel Brunelle. Courtesy of Fichten Soiferman et Associés Architectes

↘ McGill University and Génome Québec Innovation Centre

To have a child die from an illness that nobody understood, and then to have it appearing again is a pretty frightening thing," says Scriver, BA'51, MDCM'55, DSc'07, looking back on one of the pivotal moments in his lauded career.

It will be another 15 years before the first gene is sequenced. Whatever ails Scriver's patient seems very likely to be hereditary. But doctors have no way of diagnosing what exactly is wrong, and even if they could, what then? You can't do much about the genes you were born with.

Or can you?

"THESE CHANGES ARE FUNDAMENTAL"

Tour the McGill University and Génome Québec Innovation Centre in 2011 and you will see large DNA sequencing machines, such as the Applied Biosystems 3730xl DNA Analyzer, which was a frontline tool in the Human Genome Project during the 1990s and analyzes 96 samples in parallel. Sitting next to these are the latest-generation machines, which can sequence

millions of samples in parallel. In under a decade, technology has evolved that quickly.

On February 14, several floors below these labs, the Centre is celebrating a momentous day. The internationally renowned genomicist, Mark Lathrop, has been recruited back to his native Canada to become director of the Innovation Centre. He delivers a speech to leaders from McGill and the Quebec government, as well as journalists and Innovation Centre investigators. Among them is Ken Dewar, the Centre's acting scientific director, who was a co-author of the landmark February 15, 2001, *Nature* publication on the Human Genome Project.

"Genomics represents a change in the way we approach biology," Lathrop states from the podium. "Yes there have been impacts," he adds emphatically. "The molecular basis for human disease is now much better understood. Genetic mutations underline 2,000 single-gene disorders. Just in the way we can now classify and diagnose disease – these changes are fundamental and important."

This kind of genetic understanding of disease wasn't available in 1957 when Scriver was trying to save a mother's second child from a likely death. But he made a fortuitous discovery anyway. After returning home from the hospital, he picked up a pediatrics journal he subscribed to. "Here was this article about a convulsive disorder in infancy that responded to Vitamin B6."

He went back on rounds the next day and gave Vitamin B6 a try. It worked. The infant girl's seizures stopped. But why exactly? That would not be explained until 2010, when Peter Clayton of University College London identified an enzyme deficiency in the brain as the cause of seizures of this kind. Vitamin B6 restored the balance.

The treatment had actually preceded the diagnosis by half a century. With this case, Scriver had helped dash the notion that biology is destiny. You could do something about genes. You could change their environment.

GENETICS COMES OF AGE

Scriver came back to McGill from Harvard. At that time, he says "medicine had little interest in genetics." However, he found a kindred spirit in F. Clarke Fraser, MSc'41, PhD'45, MDCM'50, DSc'10, who built McGill's department of genetics in the 1950s. Fraser was a pioneer in the study of the genetic basis of birth defects and established Canada's first pediatric medical genetics department at the Montreal Children's Hospital. In 1961, Scriver founded the DeBelle Laboratory in Biochemical Genetics at the Children's to study genetic disorders in children and went on to convince the provincial government to set up the Quebec Network of Genetic Medicine. Between them, the two colleagues and friends ensured the future of the field at McGill and in Quebec.

David Rosenblatt, BSc'68, MDCM'70, the current chair of McGill's Department of Human Genetics, recalls the palpable excitement he found at Scriver's lab when he arrived in 1967. "Scriver and Fraser were extremely talented, very outward-looking people," he says. "If someone came out with outlandish ideas, Fraser would ask, 'Is that possible?'" Rosenblatt's very first publication with Scriver was in *Nature*. Careers don't start much more auspiciously than that.

THE FUTURE IS HERE

With the pioneering work that built the impressive genetics infrastructure of Quebec and McGill today, have we arrived at the era of personalized medicine – that oft-cited concept of tailoring therapies to a patient's DNA? "We are very much there," says Rosenblatt "but it will still take time and patience to integrate the complexity."

Ken Dewar explains "First you have to get the knowledge, then you have to get the understanding and then you have get the wisdom." He gives the example of *Clostridium difficile*, the bacteria which several years ago fatally spread through Quebec hospitals. Dewar's sequencing of the bacteria helped deliver a good chunk of the "knowledge." The "understanding" will be in figuring out how, on a molecular level, *C. difficile* thrives at the patient's expense. The final step, "wisdom," is taking advantage of that understanding to develop an intervention that can ultimately stop or control *C. difficile*.

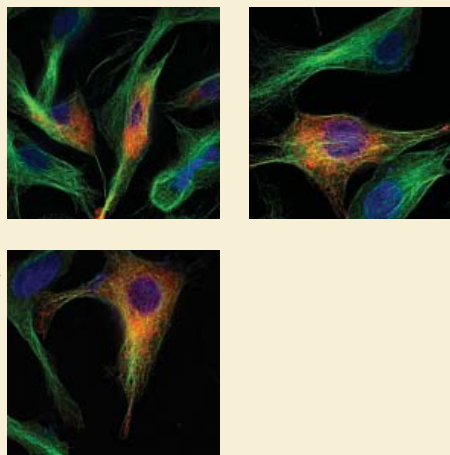
Personalized medicine, then, requires the marshalling of significant resources because geneticists and genomicists must turn their efforts to the thousands of diseases still out there. Some of the most notorious ones, lung cancer and cardiovascular disease, have been the subject of Mark Lathrop's prolific research career.

As the February 14 press conference draws to a close with almost 100 government officials, VIPs, Faculty alumni, researchers and friends looking on, Lathrop leaves the crowd with this final thought: "We at McGill, and in Quebec, have a very strong potential to be among the leaders of the new wave of genomics."

If the new wave is as revolutionary as the last half-century has been, the infant girl that Scriver saved will ultimately be joined by millions of patients whose DNA will show the way to life-saving treatments.

{ LAURENCE MIALL + MARIA TURNER }

Fluorescent microscope images show the protein (in red) that is associated with type 2 diabetes, which is being studied by Robert Sladek's group at the Innovation Centre.



Thank you to researcher Albéna Pramatarova

MARK LATHROP came to the Innovation Centre from the Centre National de Génotypage and the Fondation Jean Dausset – Centre d'Étude du Polymorphisme Humain in Paris, where he was Scientific Director. He has authored over 600 papers in genetics, genomics and statistics.

Along with Charles Scriver, F. Clarke Fraser, David Rosenblatt and Ken Dewar, countless other luminaries have brought McGill to the cutting edge of DNA research, including Leonard Pinsky, BSc'56, MDCM'60, Rob Sladek, Tomi Pastinen, Jacek Majewski, Roderick McInnis, PhD'78, and Bartha Knoppers, LLB'78, BCL'81.

GENOMICS *and ethics*: LEADERSHIP WHERE IT'S NEEDED

Stem cell research, biological data sharing, personal privacy – just a few hot button issues in genomics.

With advances in medicine and technology come new social, legal and ethical challenges. “A lot of it lends itself to fantastical science fiction scenarios,” says Bartha Maria Knoppers, LLB’78, BCL’81, director of the Centre of Genomics and Policy (CGP) at the McGill University and Génome Québec Innovation Centre. “It’s really important to contribute to a more nuanced debate.”

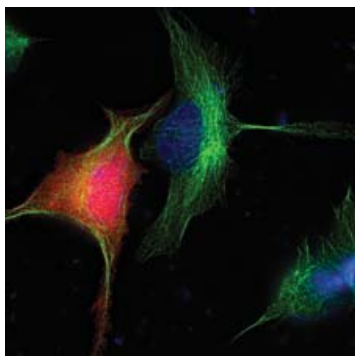
Knoppers recalls the start of the road that brought her to this point. In the early 1980s, Charles Scriver suggested she travel to Chicago to attend a meeting on quality assurance in the screening of newborn babies. “I said ‘what’s newborn screening?’” Knoppers remembers. In Chicago she was exposed to a battery of procedures that identify treatable genetic disorders in newborns – efforts that can enable early interventions that eliminate or reduce symptoms that, left unaddressed, could affect sufferers for life. Since then, genomics has been the cornerstone of her career.

With her diverse background in law, human rights and bioethics, Knoppers is deeply aware that genomics exceeds biology, also slipping into areas of legislation, culture, kinship, disability and health insurance. “There are philosophical issues that underlie genomes,” she says, “whether they be animal, plant, or human genomes, and whether it’s data sharing models that come from mouse consortia, or whether it’s plants being used as drugs.”

At the Centre of Genomics and Policy, Knoppers has built up a team of experts across disciplines, including ethics, bioinformatics, genotyping, microbiomes and law. Already, they are leading initiatives in the five key areas of the CGP: procreation and reproductive genetics, pediatric health, privacy, public health and personalized medicine.

Given the complexity and international scope of genetics, information sharing is key – but also highly challenging. Knoppers is working on bringing the Public Population Project in Genomics (P3G) – a tool-building organization for large biobanks and population studies wishing to share data – to McGill and the McGill University Health Centre. This project aims to help solve the problem of interoperability – the ability to merge datasets or share datasets across biobanks and, indeed, across borders. CARTaGENE, the 20,000-person genomics resource Knoppers built in Quebec uses P3G harmonization guidelines, including policy tools. The current Canadian Partnership for Tomorrow study on chronic conditions that is recruiting 300,000 participants does likewise.

“This is ethics in action,” Knoppers says. “I’m still totally in love with it. I’m never bored.” **{ MARIA TURNER, ABBY NICHOLS AND LAURENCE MIALL }**



Thank you to researcher Albéna Pramatarova

“This is **ethics in action**.
I’m still totally in love with it.
I’m never bored.”
– Knoppers

YOUNG ALUMNI AWARD
PAUL KHAIRY



Jean LeClair

Paul Khairy, MDCM'95, MSc'02, enjoys watching his patients get older. For some of them, it seems almost a miracle. Khairy specializes in the treatment of adults with congenital heart disease, many of whom would not have survived into adulthood just three or four decades ago. Now, thanks to advances in pediatric cardiology and cardiac surgery, the adult population with congenital heart disease is growing. Treating a new patient population is a challenge, but one that Khairy embraces. "I derive a lot of inspiration from my patients," says the cardiologist. "They have overcome tremendous challenges. Caring for them is extremely rewarding."

Medicine runs in Khairy's family. His mother and father were both physicians, his sister is a pediatrician, and even his brother, who went into engineering, ended up working in the biomedical sector. As well as being an active clinician, Khairy is passionate about research. After his MDCM, he completed a PhD in epidemiology and biostatistics and went on to co-found two research organizations, the North American Alliance for Adult Research in Congenital Cardiology and the Alliance for Congenital Quebec Interinstitutional Research (ACQUIRE). He is an associate professor who currently holds a Canada Research Chair at the Montreal Heart Institute and is Director of the Adult Congenital Heart Disease Centre (ACHD) and Director of Clinical Epidemiology and Outcomes Research at the Institute. He has also maintained a secondary appointment as Research Director of ACHD at Harvard University. If that isn't enough to occupy his time, Khairy is married with five children, including two sets of twins.

"It is a great honour to be recognized by your alma mater," says Khairy about winning McGill's Young Alumni Award.

{ MARIA TURNER }

COMMUNITY SERVICE AWARD
JOANNE LIU



For Joanne Liu, MDCM'91, recipient of the 2010 Medicine Alumni Global Community Service Award, medicine is about providing aid in the context of crises, where few want to be.

As a pediatrician with Médecins Sans Frontières / Doctors Without Borders (MSF) for the last 15 years, Liu has witnessed war, disease and famine first-hand. She has led research on epidemics like HIV, acting as a voice for some of the world's most fragile populations. She served as president and a board member of MSF Canada and successfully overcame challenges such as refugee displacements, negotiations with pharmaceutical companies to address drug shortages and hostage-taking of MSF personnel. She has managed MSF programs for Central Africa, the Middle East and Asia and has worked in isolated communities in Canada's North. Always putting patients first, she even donated her own blood to a boy in hemolytic crisis when no other source was available.

Continuing her lifelong quest to alleviate human suffering, Liu has recently worked in Haiti, providing emergency medical aid in the aftermath of last year's deadly earthquake. When not on a mission, she is a medical educator and works in pediatric emergency at Montreal's Ste-Justine Hospital.

"It's a pat on the back that encourages you to keep going," said Liu, in response to receiving the honour. "A degree from McGill is a passport to the world and deciding to study here is probably one of the best decisions of my career."

{ ANNETTE MAHON }

LIFETIME ACHIEVEMENT AWARD: VICTOR DZAU

“We should, we must, continue to seek new discoveries and translate them into better care to improve people’s lives.”

“But I’m not finished yet!” was his first thought upon hearing he had received the Medicine Alumni Global Lifetime Achievement Award.

As Victor Dzau, BSc’68, MDCM’72, DSc’08, so adamantly says, “Our work in medicine is never done.” Since graduating from McGill, he hasn’t stopped learning and accomplishing ever greater feats in medical science. From pioneering research in renin angiotensin and publishing over 400 research papers and six books, to assuming high-ranking positions with such well-regarded institutions as Harvard, Stanford and Duke, his scientific and academic influences know no bounds.

“We should, we must, continue to seek new discoveries and translate them into better care to improve people’s lives,” says Dzau, who currently serves as chancellor for Health Affairs and James B. Duke Professor of Medicine at Duke University, as well as president and CEO of the Duke University Health System. Over his career, he has championed equal access to health care for under-resourced countries, lending his expertise to the World Economic Summit and the World Health Organization, and a host of other leading international institutions. His work has earned him honorary degrees from six universities, including McGill, garnered academia’s most prestigious awards from across the globe, and a lectureship and professorship were named in his honour at Harvard and Brigham and Women’s Hospital.

“There are many at McGill, and throughout my career, who took a chance and invested in me,” he says. “It is now my privilege to foster continued advancements by sharing my knowledge with the next generation. This is my passion now and, I believe, for the rest of my life.”

{ ANNETTE MAHON }



THE CHALLENGE OF SELECTION

CHOOSING THE FINAL WINNERS FOR THE ANNUAL MCGILL MEDICINE ALUMNI GLOBAL AWARDS FROM THE MORE THAN 100 NOMINATIONS RECEIVED IS A FORMIDABLE TASK THAT FALLS ON THE CAPABLE SHOULDERS OF THE MEMBERS OF THE DEAN'S LEADERSHIP COUNCIL. Among the many advisory roles they provide for the Faculty of Medicine, Council members, who hail from leading academic institutions across the continent, are asked to review the nominations and select their top three candidates in each of three award categories: Young Alumni, Community Service and Lifetime Achievement, and from these short-lists, to choose the eventual winners.

"Naturally, it is not easy to identify the annual recipients from the outstanding nominees," notes DLC member Arnold Aberman, BSc'65, MDCM'67. "But it is a great way to recognize some of our outstanding alumni. The open nomination process encourages a more diverse group of nominees, which adds to the depth and quality of the program."

DEAN'S LEADERSHIP COUNCIL

RICHARD I. LEVIN

Vice-Principal (Health Affairs) and
Dean of Medicine, McGill University

ARNOLD ABERMAN, BSc'65, MDCM'67

Professor, Faculty of Medicine, McGill University
Former Dean, Faculty of Medicine, University of Toronto

JOHN C. BECK, BSc'45, MDCM'47, MSc'51, Honorary DSc'94

Professor Emeritus, UCLA School of Medicine

RICHARD L. CRUESS

Professor, Centre for Medical Education, McGill University
Former Dean, Faculty of Medicine, McGill University

HAILE T. DEBAS, MDCM'63, Honorary DSc'05

Executive Director, Dept of Global Health Sciences
University of California-SF
Former Chancellor and Dean of Medicine,
University of California-SF

VICTOR J. DZAU*, BSc'68, MDCM'72, Honorary DSc'08

Chancellor, Health Affairs, Duke University

ABRAHAM FUKS, BSc'68, MDCM'70

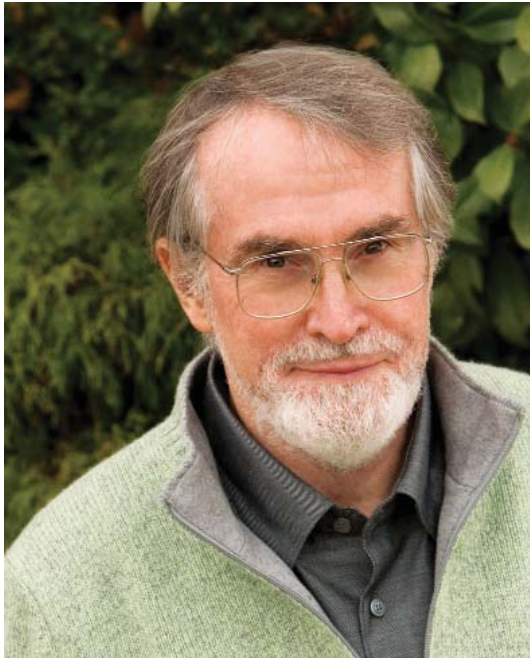
Professor, Biomedical Ethics, McGill University
Former Dean, Faculty of Medicine, McGill University

JOSEPH MARTIN, Honorary DSc'94

Professor, Neurobiology and Clinical Neuroscience, Harvard University
Former Dean of Medicine, Harvard University

** Victor Dzau recused himself from voting in the Lifetime Achievement category because he was nominated for this award.*

EXTENDING THE LEGACY OF AN EXCEPTIONAL CLASS



Clay Blackmore

E. Fuller Torrey, MDCM'63, is matter-of-fact about his many accomplishments, including his generosity. "I feel I am paying back what I owe," he says.

Torrey and his fellow alumni have donated over \$430,000 so far to the Class of Medicine 1963 Scholarship Fund, established in 1998, and they continue to donate annually. Now Torrey, along with his wife, is extending that generosity by bequeathing \$100,000 to the fund.

Classmate David Chui, MCDM'63, is not surprised. "Fuller is remarkable," he says. "He's been a trailblazer in his career. He's very modest and he's not afraid to take up the leadership."

Torrey has been standing up for his beliefs since his first year of medical school. "One of the pharmaceutical companies in Montreal was giving free stethoscopes to all first-year students," he recalls. "I raised the issue with some of my classmates that this really wasn't right – we shouldn't be taking things from the pharmaceutical companies who are going to be dependent on us for prescribing their drugs."

“
Life is
much more
interesting if you
speak out.”

Torrey's passions have been with him all his life. He was "born ornery," he says, and made the decision to become a doctor as a young boy. When it came time to decide which medical school to attend, McGill was a natural choice. It offered an excellent education, and it was in the heart of hockey country. "Hockey was a very large part of my life," explains Torrey.

Initially interested in family medicine, he went on to become a psychiatrist, in part motivated by the experience of his sister's schizophrenia. Over his career, Torrey became an advocate for assisted outpatient treatment – the right to treatment for individuals who have a history of medication noncompliance. "Life is much more interesting if you speak out," he says. He founded the U.S.-based Treatment Advocacy Center and is the Executive Director of the Stanley Medical Research Institute, which supports research on schizophrenia and bipolar disorder.

The Class of 1963 Scholarship Fund is another cause close to Torrey's heart because of his own experience as a student. "I had to work very hard," he says of his time at McGill. He and his wife lived far from the University and struggled to make ends meet. McGill stepped in to help out. "The administration took a personal interest in the students," remembers Torrey.

Torrey is not alone in his gratitude to his alma mater. "McGill opened the door for all of us to achieve what we wanted to achieve," says Chui. The Class of 1963 has been very successful in maintaining contact and fundraising for the scholarship, thanks, says Torrey, to the hard work of both Chui and David Boyd, MDCM'63, known as the "Class Czar" for his initiative in organizing class reunions. Chui is modest about his own contributions. "Everyone has contributed in his or her own way," he says. Torrey agrees. "We're an exceptional class," he says.

{ MARIA TURNER }

ALUMNUS BROUGHT HOPE TO a *small island* COMMUNITY



Bob Brown, Richmond Times-Dispatch

➤ David B. Nichols, left, and Jimmie Carter, Founder and Chairman, Tangier Island Health Foundation, at the dedication of the new clinic.

A McGill medical graduate with a lifetime career that has left an indelible impression on the practice of family medicine in the United States, David B. Nichols, MSc'72, MDCM'76, always said he gained far more from his patients than he provided them.

“**T**hey taught me to put people first because human connectedness is far more important than materialism,” he said. Although Nichols treated thousands of patients at his White Stone Family Practice in Virginia, he was fondly referring to his relationship with another community that developed over 31 years.

Every Thursday morning for three decades, Nichols – who also had a passion for flying – navigated his own aircraft to the remote airstrip of Tangier Island in the Chesapeake Bay, some 20 kilometres off the Virginia mainland. What began as an attempt to fill a gap in care delivery blossomed into a quest to transform health services for the island’s 525 inhabitants.

Founded some 400 years ago, Tangier Island’s people are mostly descendants of its first settlers. Certain local genetic dispositions, including a high susceptibility to lipid disorders, combined with poor daily living habits like smoking and inactivity, compounded the medical challenges that Nichols faced. The medical clinic where he practised, built in 1957, was dilapidated and sorely lacking in modern technical equipment, but Dr. Nichols happily persevered. “During the course of my first visits, some of

the islanders said to me, ‘Don’t come here if you’re just going to turn around and go away after a year, because we get dependent on you.’ I told them, ‘If I come, I plan to stay.’”

And stay he did. Nichols’s dedication to family practice earned him the 2006 Country Doctor of the Year Award and, just this past year, the inaugural Country Doctor of the Decade Award, both from AMN Healthcare, the largest health care staffing company in America. Nichols also recently received the prestigious Jefferson Award for Humanitarian Service, honouring community and public service in the U.S.

Growing up in a close-knit family in Winnipeg, the value of higher education was instilled in Nichols by his parents from an early age. This eventually led him to McGill, where he pursued a master’s degree in anatomy and histology. “Doing research made me a better doctor because I could see what goes into medicine,” Nichols recalled.

Drawn to family medicine, he entered McGill’s MDCM program. In his third year, he took a family boat trip off the Virginia coast to a quaint island that was woefully lacking in health care services. “My brain started clicking and I thought

the extra step “I’ve always gone to make a difference and I hope that is what sticks in people’s minds.”

that maybe one day I might come and help Tangier.” With this goal in mind, in his last year of residency, he pursued flight training so, as he put it, “I could combine my two biggest passions, flying and medicine.”

Nichols was able to fulfill another dream in August 2010 with the opening of the David B. Nichols Health Center on Tangier Island, a \$1.7-million state-of-the-art facility that he, together with a handful of dedicated visionaries, made possible thanks to their tremendous fundraising efforts over the last five years.

As Nichols recalled some of his fondest experiences as a physician, he did so with the clear vision of a man whose own failing health reminded him of the most important things in life.

Diagnosed six years ago with a malignant melanoma in his left eye, he thought he had beaten the disease. But in July of 2010, a scan revealed a recurrence of terminal cancer in his liver.

With a sense of profound appreciation of his life, he calmly reflected on his impressive career with no regrets. “I want to be remembered for helping my fellow man, and for being a good family man to my wife, Dianne, BN’73, and to my two children, Sarah and Davy. I’ve always gone the extra step to make a difference and I hope that is what sticks in people’s minds.”

{ ANNETTE MAHON }

EDITOR’S NOTE: ON THE MORNING OF FRIDAY, DECEMBER 31, 2010, several weeks after his interview with *Focus*, Dr. David Nichols succumbed to cancer, passing away at the same hour as he usually left for Tangier. As he so eloquently shared with the island community last August, “Though I may leave you in body, I will never leave you in spirit.”

HONOURING GERTRUDE MUDGE

Nihil discipulorum mihi alienum. Appearing in an article entitled “Our Miss Mudge” in the April 1953 edition of the *McGill Medical Journal*, this Latin phrase meaning “Nothing related to students is foreign to me,” was attributed to Gertrude Mudge, assistant secretary of the Faculty of Medicine for 30 of her 38 years at McGill. In that time, she befriended and encouraged thousands of students, taking special interest in the challenges facing young women hoping to enter the medical profession.

With an amiable and unpretentious air, Mudge deftly balanced a workload that today would be considered adequate for a team of employees – responding to telephone and mail inquiries, updating student notice boards and liaising with the teaching hospitals, as well as organizing student prizes, assisting with student registration, updating student records, moderating the assignment of internships and electives, and arranging examination timetables and the tabulation of final grades. Mudge was once referred to as “the woman behind the throne” – the “throne” being the Faculty of Medicine – and was certainly its most relied-upon administrator.

The abundant admiration and gratitude bestowed on Mudge by so many was formally acknowledged upon her retirement in December 1953 with the presentation of a commemorative quaich bowl (an antique two-handed drinking cup) from medical students and graduates. At convocation ceremonies in 1955 she received an honorary Master of Arts degree in recognition of her many years of service to McGill.

Today, a meeting room bearing her name in the McIntyre Medical Sciences Building honours all administrative staff members who support the many functions of the Faculty, and the quaich bowl is proudly displayed in Holmes Hall. In addition, the Gertrude Mudge Memorial Student Aid Fund, established following her death in 1958, provides current medical students with financial support to pursue their studies.

The *McGill Medical Journal* article concludes with a fitting tribute to the beloved Miss Mudge: “It is not possible to give adequate tangible expression of affection to a woman who has done so much for the Faculty of Medicine, its professors and students.” { ANNETTE MAHON }

FOUR CHARLES LARSONS, FOUR MDCMS

To borrow a cliché, you can't make this stuff up: a grand total of four Charles P. Larsons – all from the same family – have graduated from McGill with MDCMs. Now the latest in the long line, Charles P. Larson, MDCM'08, is about to become the chief resident of general pediatrics at Toronto's Hospital for Sick Children.

"We've had to be creative to find names to publish under," laughs the youngest Larson, age 26, the first of the line born in Montreal.

The Larsons' long and winding relationship with McGill began in Washington state. The late Charles Philip Larson, MDCM'36, came from a family of Spokane bankers who lost everything in the Great Depression. He wanted to go to medical school and contacted a family friend for advice. The friend happened to be groundbreaking neurosurgeon Wilder Penfield.

Penfield suggested that Larson apply to McGill and wrote a reference letter that helped open the doors for the budding pathologist. After graduating, Larson became the first Allied physician to enter the Nazi concentration camp at Dachau as part of the War Crimes Investigation Team.

"He was on the front lines and they had to get him there quick," his son Charles Palmer Larson, MDCM '71, MSc'88, recalls on the phone from his home in Vancouver. "He'd end up in these concentration camps even ahead of the troops sometimes."

This work would cement Larson's international reputation and help make the field of forensic pathology immediately relevant to the world. After the war, the '36 Larson quietly went back to Washington, where he and his wife got on with raising their family. And what a family – Charles Philip Larson, MDCM'58, after training in anesthesia, joined the Faculty of Medicine at the University of California, San Francisco, later became the chair of the department of anesthesia at Stanford, and is now at the University of California, Los Angeles. Charles Palmer, his brother, is a Vancouver pediatrician and epidemiologist who does research in global health and is an adjunct member of McGill's pediatric faculty.

"I guess there's a certain expectation or standard to live up to," says the newest Larson. "I remember reading a biography on my grandfather as a little kid. There was pressure to do something important in my life and make a difference in the world."

His father sums up what attracted him to study at McGill in the late 1960s. "I had been admitted to other medical schools," he says, "but what really grabbed me when I went up there was the French influence. It really seemed like an appealing place to study. You don't say no to McGill."

{ BILLY SHIELDS }

MAKING HER MARK IN PUBLIC HEALTH

Immigrating to Canada from France at a young age, Sylvie Stachenko, BSc'71, MDCM'75, set her sights on an altogether different career path when she entered the McGill medical program. "I wanted to be a biomedical engineer," she says. "I dreamt of one day working at NASA, focusing my energies on the effects of space travel on the brain and inner ear." Fortunately for the numerous government organizations and academic institutions to which she has lent her expertise, as well as the countless people she has influenced over the past 20 years, she traded this aspiration for a very human connection to medicine.

At a time when primary care was gaining more prominence in Quebec, she became the first graduate of a family medicine residency at l'Université de Montréal. She was hired as a professor the very next year. With a keen interest in family medicine's role within the community, Stachenko went on to complete a master's degree in epidemiology and health services administration at Harvard University and trained at the London School of Hygiene & Tropical Medicine.

Among her numerous contributions to health promotion and disease prevention, Stachenko has spearheaded the creation of chronic disease policies for diabetes, cardiovascular disease, breast cancer and AIDS. She has held high-ranking positions with the Public Health Agency of Canada, Health Canada and the World Health Organization.

Stachenko has once again crossed over to academia in her current role as dean of the only stand-alone public health faculty in Canada, at the University of Alberta. "We are foreshadowing the future of public health, which requires systems thinking and unique perspectives drawn from a host of fields, including engineering, kinesiology, urban planning and commerce," she says.

She is grateful for the many opportunities that medicine has afforded her. "It is one of the most fantastic careers you can have because it allows you to go into so many directions," Stachenko says. "And at its core lies education, which is, and always will be, lifelong." { ANNETTE MAHON }

FOUR CHARLES LARSONS



↘ MDCM'36



↘ MDCM'58



↘ MDCM'71



↘ MDCM'08

McGill University Archives

KEY DATES

A CELEBRATION OF STUDENT ACHIEVEMENT AND DONOR SUPPORT

Thursday, March 31, 2011
Holmes Hall, 3605 de la Montagne
A celebration in honor of student achievement and philanthropy at the Faculty of Medicine.
Information: Mahsa Yeganeh
514-398-5304,
mahsa.yeganeh@mcgill.ca

CANCER SURVIVORSHIP: WITH, THROUGH AND BEYOND

Lecture by Marla Shapiro, MDCM'79
Monday, May 16, 2011
Mount Royal Centre, 2200 Mansfield
Information: Annette Novak
514-398-4970,
annette.novak@mcgill.ca

PERSONAL EFFECTIVENESS: MANAGING THE "TYRANNY" OF TIME

May 19, 2011, 8:30 a.m. to 12:00 p.m.
New Residence Hall, 3625 ave du Parc
Information:
<http://www.mcgill.ca/medicinefacdev/programs/workshops/>

HOMECOMING 2011

Thursday, October 13 to
Sunday, October 16, 2011
Website: aoc.mcgill.ca/network/homecoming/events

LEACOCK LUNCHEON

Friday, October 14, 2011, 11:30 a.m.
Hotel Hilton Bonaventure,
900 de la Gauchetiere W
Speaker: Lorne Elliott
(Canadian humourist, storyteller
and musician)
Information: 514-398-5924

CHARLES PHILIPPE LEBLOND SYMPOSIUM

Friday, October 14, 2011
Strathcona Building, M1/
Leblond Theatre
An inaugural symposium in
honour of Charles LeBlond.
Information: Sandra Botbol
sandra.botbol@mcgill.ca



3RD ANNUAL MEDICINE ALUMNI GLOBAL AWARDS

NOMINATE SOMEONE FOR A MCGILL MEDICINE ALUMNI GLOBAL AWARD

AWARD CATEGORIES:

LIFETIME AND CAREER ACHIEVEMENT AWARD

Presented to an alumnus of the Faculty of Medicine's MDCM program who has enhanced the reputation of McGill University through a lifetime contribution of exceptional leadership.

ALUMNI AWARD FOR COMMUNITY SERVICE

Presented to an alumnus of the Faculty of Medicine's MDCM program who has made outstanding contributions to the betterment of local and/or global communities.

YOUNG ALUMNI AWARD

Presented to an alumnus of the Faculty of Medicine's MDCM program who, within 15 years of graduation, has made important contributions to society and to McGill University.

NOMINATION DEADLINE:

August 1, 2011

ANNOUNCEMENT OF WINNERS:

October 14, 2011,
during McGill's Homecoming celebrations.

For more information, visit
<http://www.medicine.mcgill.ca/alumni/corner/awards>
or phone 514-398-5924.

HOMECOMING 2010

Our alumni travel from far and wide to renew old acquaintances, forge new ones, and find out about new scientific research and the ongoing impact of their peers in health care. 2010 was a banner year. Here are just a few of the memorable moments.

Photos: Nicolas Morin



Blair Ford, MDCM'85, speaks at the Class of 1985 Seminar. Read about his work in the area of deep brain stimulation on page 9.



Nursing alumni Barbara M. Flam, BScN'65, MSc(A)'85 and Beverly A. Rowat, BScN'65, MSc'87, enjoy the Dean's Cocktail Reception.



Class of 1985 Seminar: from left to right, David B. Spring MDCM '70, Richard H. Sims, MDCM '70, Suzanne Sims (spouse), Tina Clark, Cecilia Leslie, MDCM '70, Eldon S.V. Williams, BSc '56, MDMC'60.



Paul Khairy, MDCM'95, MSc'02, celebrates winning the Young Alumni Award with his family, wife Nadine Yared and children Leia, Justin and Thomas. Read more on page 15.



Joanne Liu, MDCM'91, speaks about the vitally important healing role doctors can play in the many underprivileged parts of the world after winning the Community Service Award. Read more on page 15.



Betram Sohl, MDCM'80, Allan Fielding, MDCM'80, Harvey Finkelstein, BSc'76, MDCM'80 enjoy Tea Time Talks With Docs, a gathering with MDCM students.

\$150,000 EACH FOR PROMISING MCGILLIANS (VANIER SCHOLARS)

- **SEBASTIEN BORIDY, BSc'07**
Faculty of Medicine (Drug Research)
- **EMILY B.J. COFFEY**
Faculty of Medicine (Mental Health)
- **MATTHEW PARSON**
Faculty of Medicine (Immunology-Transplantation)
- **JENEA BIN, JIEUN CHA, MSc'09, MSC'11, MOHSEN JAMALI, SEBASTIEN LANGLOIS, BEng'05, Meng'07**
Faculty of Medicine (Nervous System)

ORDER OF CANADA HONOUREES:

- **SYLVIA R. CRUESS, O.C.** (Faculty member) For her pioneering contributions to medical education
- **GILLES JULIEN, C.M.** (Faculty member) For his innovative contributions as a driving force in social pediatrics
- **MAURICE MCGREGOR, O.C., C.Q. (EMERITUS PROFESSOR)** For having pioneered and championed the field of health technology assessment in Canada, and for his leadership in medical education and cardiology
- **ROBERT H. TAYLOR, MDCM'70**
For his humanitarian contributions to improving medical services and surgical care in underserved populations of the world.

- **MICHAEL BIDINOSTI, PhD'10, ROMAIN GOUTAGNY, JESSE JACKSON, TAL KRASOVSKY, ERIC TRUDEL, PhD'09**
McGill MedStar winners (students)

FACULTY

- **ALBERT AGUAYO (see story below) JONATHAN C. MEAKINS, MDCM'36, CBE (1882-1959)**
2011 inductees into the Canadian Medical Hall of Fame
- **SASHA BERNATSKY, MSC'02, PhD'05**
PhD'05 Winner of the Mary Betty Stevens Young Investigator Prize and the 2010 Young Investigator Award of the Canadian Rheumatology Association
- **SUZANNE BOUCHARD**
Prix d'excellence of the Collège québécois des médecins de famille (CQMF) in the "Contribution to medical education" category
- **DAVID BUCKERIDGE**
Winner of first edition of "Ça mérite d'être reconnu!" competition
- **MARC COTRAN, MDCM'03**
Recipient of the Family Resident Leadership Award 2010 from the College of Family Physicians of Canada
- **ANDRÉ JAKUBOW, BA'05, BSc'05**
Recipient of the Family Resident Award for Scholarship from the College of Family Physicians of Canada
- **BRENDA MILNER, PhD'52, DSc'91**
Nominated one of 25 "Transformational Canadians"
- **RÉMI QUIRION**
Awarded honorary degree from INRS
- **CHARLES SCRIVER, BA'51, MDCM'55, DSc'07**
2010 John Howland Medal
- **YVONNE STEINERT**
Recipient of CAME 2011 Ian Hart Award
- **RUTH VANDER STELT**
Recognized by the CFPC Reg L. Perkin Awards for the province of Quebec; Also named one of Canada's Family Physicians of the Year for 2010
- **MARK WAINBERG, BSc'66**
Honoured with 2010 Prix du Québec - 2010 Wilder Penfield Prize by the Quebec government for his medical work.

2011 CANADIAN MEDICAL HALL OF FAME INDUCTEE > ALBERT AGUAYO

Officer of the Order of Canada, Gairdner Foundation International Award recipient and Killam Prize winner for lifetime contribution to health sciences – these are but a few of the accolades that Albert Aguayo has garnered throughout a monumental career that spans 43 years at McGill. Now, in recognition of his remarkable achievements in the field of neuroscience, he adds yet another distinction to this growing list – 2011 Canadian Medical Hall of Fame inductee.

Internationally renowned for his ground-breaking research on neural regeneration and repair, Aguayo successfully proved that the central nervous system could restore nerve fibres and function following trauma or illness. Hailing from Argentina, Aguayo joined McGill in 1967 and became a full professor in 1977. Founder and director of McGill's Centre

for Research in Neuroscience for 15 years, he also held the position of scientific director of the Canadian Network of Centres of Excellence in Neuroscience for a decade. He has taught at academic institutions around the world and is the former secretary-general and president of the International Brain Research Organization, a UNESCO affiliate representing more than 50,000 neuroscientists. Aguayo joins the ranks of 82 other Hall of Fame laureates receiving this exemplary national honour in 2011, including fellow McGill awardee, the late Jonathan Meakins, MDCM'36, who, in addition to being an outstanding teacher, investigator and leader, served as dean of the McGill Faculty of Medicine in the early 1940s.

Upon his retirement in 2010, Aguayo was also awarded the prestigious McGill University Medal for Exceptional Academic Achievement at the spring convocation. { ANNETTE MAHON }



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For more information, please contact the Development and Alumni Relations Office of the Faculty of Medicine at 514-398-3206 or email alumni.medicine@mcgill.ca

