Message from the Dean

A very happy, healthy and prosperous New Year to everyone. The year 2009 will be an exciting time for the Faculty of Medicine as we carry on with our medical curriculum renewal and enhancement, and continue to plan for expansion of our facilities for teaching and research. We will be looking to make our curriculum more welcoming and sensitive to Aboriginal students, and you can read more about this on page 13 of this issue of MUNMED.

As a faculty we are much more than a medical school. Our educational curriculum includes a wide offering of graduate programs. Shortly after it was founded, the Faculty of Medicine began offering a program of graduate studies leading to the degrees of M.Sc. and PhD. Today our alumni include more than 420 holding graduate degrees and diplomas.

In the past decade the number of graduate students in the Faculty of Medicine has more than doubled. Today there are more than 230 students enrolled in eight program areas leading to M.Sc. and PhD degrees, the MD-PhD degree, and diplomas in Community Health and Clinical Epidemiology. As well, the master’s in Applied Health Services Research is offered through the Atlantic Regional Training Centre, a joint venture between Memorial University, Dalhousie University, the University of New Brunswick and the University of PEI. In the fall of 2008 we began to offer a master’s in Public Health Program, and there are 10 full-time and four part-time students enrolled in this program.

Our graduate students are doing important work that contributes to the research enterprise of our faculty. In this issue of MUNMED we highlight the work of a few of these students. The research expertise of our faculty members also attracts undergraduate students looking for supervisors for their honours thesis. Some of these students go on to become medical students, others to pursue graduate studies.

I am enormously proud of the research expertise in our faculty and I look forward to seeing that expand and deepen as we plan for construction of a new research building to house our activities.

Dean James Rourke
MD, CCFP(EM), MCIsc(FM), FCFP
Faculty of Medicine
Jared Clarke is searching for better ways to promote recovery of function after stroke. As a PhD student under the supervision of Dr. Dale Corbett, Canada Research Chair in Stroke and Neuroplasticity, he is looking at rehabilitation in an animal model to see what approaches work best following an ischemic stroke.

An ischemic stroke is death of an area of brain tissue resulting from an inadequate supply of blood and oxygen to the brain due to blockage of an artery, often resulting in impaired ability to perform daily physical activities such as walking, reaching and grasping things with the hands. While it is known that rehabilitation helps people who have suffered a stroke recover some function, the exact neural mechanisms that enable this are unclear.

Using rats, Jared is able to look at both the behavioural changes associated with functional recovery and the repair processes that are going on in the brain. The remarkable thing about the brain is its neuroplasticity, or ability to adapt its physical structure following injury. “We’ve realized the brain is capable of tremendous change. Rehabilitation promotes many changes in the brain, resulting in upregulation of growth factors, new connections, and possibly even generation of new cells to replace those lost during stroke.”

The technique for promoting recovery in a rat is twofold. They live in groups in an environment with lots of sensory and motor stimulation, similar to a human rehabilitation environment. This is paired with task specific reaching therapy, where the rat is offered treats that can only be reached by using the impaired paw. This “enriched rehabilitation” model helps rats improve their ability to walk and reach following stroke, just like physical rehabilitation does for humans.

“I am looking at when the best time is to use these techniques to promote recovery following stroke, and how much is enough,” explained Jared. “We know that starting rehabilitation early is important, when the brain is primed for repair. But we also know that we can do a lot to improve the way we treat stroke – we just need to figure out how.”

In addition to the histological work of studying brain slices, Jared has also collaborated with University of Manitoba researcher Dr. Jim Peeling in looking at animal brains with magnetic resonance imaging (MRI). “The MRI can look at the brain and developing changes at different times, whereas the histology we routinely do in the lab is just a single snapshot in time. It’s important to do both.”

During his doctoral studies, Jared had the opportunity to spend eight months in Finland at the University of Kuopio studying the links between stroke and Alzheimer’s disease. The University of Kuopio has one of the only rat models in the world for this research, and he learned a lot about the relationship between these two debilitating diseases.

In addition to scholarship support received from the Natural Sciences and Engineering Research Council of Canada (NSERC), Jared is also the recipient of the first annual Keith Griffiths Memorial Award from the Newfoundland and Labrador Heart and Stroke Foundation. He has been active in the Medical Graduate Student Society, serving as president from September 2007 to December 2008.
Lance Doucette is researching two rare genetic eye diseases in Newfoundland families.

He started out in Dr. Terry-Lynn Young's molecular genetics lab as an undergraduate biochemistry student, studying inherited hearing loss for his honours thesis. This work resulted in the discovery of a new mutation in a gene that usually causes Usher syndrome, a form of hereditary deafness associated with blindness. He is the first author of this study that has recently been accepted for publication in the European Journal of Human Genetics. The study is titled “Profound, prelingual nonsyndromic deafness maps to chromosome 10q21 and is caused by a novel missense mutation in the Usher syndrome type IIf gene PCDH15.”

Following completion of his B.Sc., Lance embarked on his master's of science (medicine) and has recently rolled over after two years in that program into a doctoral program studying hereditary eye disease.

Lance's first hereditary eye project involves a family from the island’s south coast with anterior segment dysgenesis, a malformation of front part of the eye that causes reduced vision and sometimes total blindness in a large family. He has collected DNA from 23 members of the affected family, 10 of whom have the disease. “We suspect it's an autosomal dominant condition and we’re trying to figure out the genetic cause.”

This malformation results in blindness from congenital cataracts and other malformations of the front of the eye. In its most serious form it is known as Peters anomaly, in which the central part of the cornea is hazy and white and the lens of the eye may be cloudy.

Lance's second project involves another family from the south coast with microphthalmia (abnormally small eyes) causing blindness, proportionate dwarfism and a number of endocrine problems. “Based on the structure of the pedigree we think this is caused by a single autosomal recessive gene.” said Lance. The condition is similar to Hallermann-Streiff syndrome, a rare genetic disorder with many of the same presentations as this family.

While Lance is enthusiastic about his research he cautions that graduate work is not for everyone. “You have to love doing it, there are days you might be here for 12 hours and other days things may be a lot slower.”
Embryonic development

Mark Kennedy’s doctoral research in the Terry Fox Cancer Research Laboratory involves studying the roles of maternally expressed genes in embryonic development. Under the supervision of Dr. Ken Kao, he is studying how certain maternal factors regulate cellular differentiation in the developing embryo.

“Specifically, my research is on the earliest events that regionalize the embryo creating a ‘body plan’ or ‘blueprint’ that ensures the proper development of organ systems,” explained Mark. “We use a classical system, the African-Clawed frog, as a system to study the genes in embryonic development.”

Determining the mechanisms of cellular differentiation that subdivide the embryo into groups of cells that predictably give rise to specific structures in the adult is a fundamental problem in embryology. Recently published research from Dr. Kao’s lab indicates that Xrel3, for example, is critical to the differentiation of embryonic precursor cells that will become the skin and central nervous system.

Mark has done well in his studies so far, winning a Best Presentation Award for an oral presentation at the Cancer Journal Club in 2008. He has also received two travel awards, one for a poster and oral presentation at the Canadian Congenital Anomalies Surveillance Network in 2007 and another to attend a focused conference in Germany on the developmental biology of the frog in 2008.

Informed by motherhood

During her doctoral studies, Kelly Monaghan has learned to constantly interrogate her own assumptions. Under the supervision of Dr. Natalie Beausoleil, Community Health and Humanities, she began with a fairly straightforward study of junior high students’ mass media activity and its relevance to adolescent health.

This descriptive study took on an added dimension when Kelly initiated an action research project in a local junior high school with media literacy goals. The students had an after school group that did news pieces on current events. For this project they produced a five-minute documentary exploring media impact on adolescent health, choosing to focus on unhealthy eating, technology addiction and body image issues.

“I began to reflect on the assumptions of my research and became increasingly uncomfortable with its construction of youth both ‘as risk’ and ‘at risk,’” said Kelly. “Using expert discourses these students were critiquing their own culture, yet it wasn’t clear if all this had any bearing on their own relationship with media.”

Now, said Kelly, her goal is to reflect on and critique her own research. Her thesis is titled “Youth, media and risk: mapping ways of seeing in this postmodern time.”

In addition to being a graduate student, Kelly has four young children and is a community activist who co-ordinates Friends of Midwifery and is involved in the Newfoundland and Labrador doula movement. A doula is an assistant who provides various forms of non-medical support, such as physical, emotional and informed choice, in the childbirth process.

“My work as a graduate student is completely informed by myself as a mother and a community activist,” said Kelly.
What are the barriers towards access and uptake of genetic services from the perspective of genetics professionals? That’s the question Valerie Darmonkow is exploring in her master’s thesis.

The research topic fits well with her position as information access and privacy analyst for the Faculty of Medicine. When a person with a particular genetic condition provides information about themselves, it also unveils information about family members, and there is an ongoing debate about disclosure of that information.

Valerie chose this topic for her research for both personal and professional reasons. She had a close friend who died suddenly of ARVC (arrhythmogenic right ventricular cardiomyopathy). Around that time she found out that geneticists at Memorial were studying that disease (and in fact early last year identified the responsible gene) and became involved in the work being done under the umbrella of the Atlantic Medical Genetics and Genomics Initiative (AMGGI).

An integral component of the AMGGI proposal is the innovative study of the potential impacts of genetic discovery on the provision of health care services, including assessing the well-being of patients and families who are affected by genetic conditions and who are the most likely consumers of new genetic technologies. Led by the Memorial ethics professor Dr. Daryl Pullman, AMGGI’s GE’LS (Genomics, Ethics, Environment, Economic, Legal and Social issues) team examines the values, beliefs and practices of medical professionals, including medical geneticists and genetic counsellors who are the providers of genetic services, as well as those of patients, families and communities in which these services are offered.

Dr. Fern Brunger, Division of Community Health and Humanities, is a collaborator with the GE’LS team. Under her supervision, Valerie is conducting qualitative research on the genetics professionals’ perspectives on the barriers towards access and uptake of genetics services. The theme focuses on one segment of the work the GE’LS team is set to accomplish. To date, Valerie has completed the individual interviews with the research subjects and the collected data has been transcribed and analyzed.

“As I write up my paper, I am learning so much, which feels inspiring,” said Valerie. “Eventually I would like to continue this work at a PhD level.”
Focus on graduate research

The science of breast cancer

Jaclyn Clements is studying breast cancer on a molecular level under the supervision of Dr. Laura Gillespie, Terry Fox Cancer Research Laboratory. Specifically, she is looking at the effect of estrogen on a gene that was previously discovered in Dr. Gillespie’s and Dr. Gary Paterno’s lab, named human mesoderm induction-early response one (hmi-er1). This gene has been implicated in breast cancer as it has been found to be differentially expressed in breast cancer cells and tissues.

In order to investigate whether estrogen has a role in this aberrant expression, Jaclyn is treating cells with special reporter plasmids that contain regulatory regions of the hmi-er1 gene that are involved in dictating whether the gene becomes expressed. She then treats the cells with estrogen and is able to observe whether estrogen activates these areas of the gene by measuring the amount of light produced, since the reporter plasmids are designed to produce a protein that gives off light after they’ve been activated.

Jaclyn’s undergraduate degree from Dalhousie University was in microbiology and immunology. Her honours project was in immunology, so her M.Sc. work with Dr. Gillespie is taking her in a different direction.

“I read about Dr. Gillespie’s work on the web and contacted her. Fortunately she had a lab opening and I was able to start my program in September 2007. I can see the end in sight now!”

Jaclyn said she loves the science involved in her research, especially since it involves breast cancer. But she also loves working with people and hopes to someday combine these two interests by studying medicine.

Alternative messages

Pam Ward is concerned about the messages children get about their body image, and her doctoral thesis is exploring body image and self-esteem in children over the 95th percentile of weight.

Pam is a PhD student in the Division of Community Health and Humanities, supervised by Drs. Natalie Beausoleil and Olga Heath. She is also on faculty at the Centre for Nursing Studies, teaching in the BN (Collaborative) Program.

She will be doing her research within the Lifestyle Program at the Janeway Child Health Centre to develop alternative messages. “This program doesn’t focus on weight but on empowerment and raising self-esteem.”

Pam said it is important that children learn that being thin doesn’t equate with health. “We want them to exercise and eat well, but also feel good about themselves.”

Pam is also working with the Body Image Network, which has a $40,000 provincial grant to train teachers about body image concerns through professional development days. Modules are being developed for Grade 2 and 4, with another one for Grade 9. As well there is a poster and pamphlet campaign, and a website for teachers, the general public and students.

She is also working with the Eating Disorder Community Capacity Building Project and co-ordinated the prevention component of a tool kit for health professionals in Newfoundland and Labrador on how to deal with eating disorders.

In terms of her doctoral thesis, Pam is framing it from a post structural feminist framework. “I’m looking at how the concept of obesity is formed. I’m analyzing messages and breaking down how children pick up messages. The challenge is to alter these ideas.”
Focus on graduate research

Studying specialist retention

How long do specialist physicians stay in Newfoundland and Labrador?

That’s the question Patrick Fleming is trying to answer before he embarks on his education next year as a medical student.

Under the supervision of Dr. Maria Mathews, Patrick’s master’s thesis is examining whether retention of specialists varies among physicians who are locally trained, trained in other Canadian provinces, or trained in other countries. The objective of this project is to identify strategies to recruit and retain specialists.

Patrick notes that a number of studies have examined the retention of rural and primary care physicians, but little work has been done on the retention of specialists.

Using quantitative methods, Patrick will link 15 years of registration data (1992-2007) from the College of Physicians and Surgeons of Newfoundland and Labrador with the 2007 Scott’s Medical Database and cross-reference this with the MUN postgraduate database.

Patrick has already won a number of awards during his graduate studies. He received the Medical School Essay Graduate Student Award for 2008-09 for his essay “Physician Retention: Factors in the Canadian Context.” He was awarded the Canadian Institutes for Health Research Frederick Banting and Charles Best Canada Graduate Scholarship Master’s Award for 2008-09 and the Newfoundland and Labrador Center for Applied Health Research Master’s Fellowship for 2008-09.

The previous year he was awarded the Dr. Jorge Segovia Scholarship in Health Services Research, the Graduate Student Union Award for Excellence in Community Service and the School of Graduate Studies Merit Award.

One of Patrick’s many volunteer activities is participating as a member of the board of directors of the Canadian Mental Health Association. This year he is chairing a committee looking at developing a mental health scholarship.

Keeping doctors in Newfoundland and Labrador

Patrick Fleming’s supervisor, Dr. Maria Mathews, is an associate professor of health policy/health care delivery. She has completed many studies aimed at compiling an accurate picture of physician retention and its impact on communities, medical organizations and patients in Newfoundland and Labrador.

Her most recent study shows that within one year of receiving a full medical licensure, most international medical graduates (IMG) leave the province. Retention rates were similar for graduates from Canadian medical schools other than Memorial. The retention rate for both IMG and Canadian medical graduates was a little over five per cent with a median retention time was 22 months, compared to 35.7 per cent and 39 months for MUN medical graduates.

The study concludes that provisional licensing provides only a short-term solution to ongoing physician shortages in Newfoundland and Labrador – but that eliminating it would be detrimental to the health care system.

Dr. Mathews is now creating a registry of physicians and medical practices to track where doctors practice and for how long.
Laura Edwards is now in first-year medicine, but she is grateful to already have a solid background in genetics research. Supervised by Drs. Michael Woods and Bridget Fernandez, Laura did an honours thesis on familial pulmonary fibrosis (FPF) for her biochemistry degree, and then began a master’s program in the same area.

“The high prevalence of familial pulmonary fibrosis in Newfoundland is suggestive of a novel genetic etiology,” she explained. “Known mutations in particular genes have been excluded in the FPF Newfoundland families and now we are looking to determine if mutations in novel genes are causing FPF.”

Laura is enthusiastic about scientific research in genetics. “Studying genetics in Newfoundland is a unique opportunity because the way in which the province was settled lends itself well to studying particular genetic diseases and the people here are very willing to participate in these studies. Genetic research is very important to me and I am grateful that I am part of this community of scientists in Newfoundland and Labrador that impact lives in a positive way, every single day. Finding genes that cause hereditary diseases is an important field, as it continually helps individuals to understand their disease and allows them to have the opportunity to make important decisions and choices that can affect their health and benefit their life, as well as the lives of their family members.”

Laura said the training she acquired in Dr. Woods’ genetics lab has contributed to her productivity in research and allowed her to decide on a career path that will enable her to continue to increase her knowledge in genetic research and use it appropriately to continue helping individuals affected with hereditary diseases.

Laura’s goal is to complete her master’s thesis this spring. “Entering medical school and hopefully becoming a family physician one day will give me the opportunity to interact with patients directly and use my extensive genetic background to further enhance their medical care. I will continue my collaboration with genetic research scientists, as well as with other scientists, to enable and enhance both research and clinical care for patients in Newfoundland and Labrador.”

Laura expects that her research experience will help educate other practicing physicians on how important the genetic causes of diseases are. “The collaboration between genetic research scientists and clinicians is essential for the overall treatment of families living with hereditary diseases. Such teamwork will undoubtedly accelerate the understanding of particular diseases, such as familial pulmonary fibrosis. It will help identify individuals that may be affected with fatal hereditary diseases earlier and will help reveal unexpected links between genetics and health care that may lead to the development of therapeutic agents that can benefit individuals in need.”
Angela Wareham is a first-year medical student, but she also has a background in research in the Faculty of Medicine.

While doing an undergraduate degree in nutritional biochemistry, she approached Dr. Daniel MacPhee, BioMedical Sciences, to supervise her honours thesis.

Angela’s honours thesis was on characterizing the expression of small heat shock protein B8 (HspB8) present in rat uterine smooth muscle at different time points throughout pregnancy and labour to help determine the protein’s role in normal uterine function.

“With this project I hoped to make a small contribution to the greater ongoing investigation into the underlying mechanisms that regulate uterine contractions that help expel the fetus during labour,” she said. “These mechanisms are still currently not well understood. This knowledge is important because abnormalities in uterine contractions can cause preterm birth, a problem responsible for large numbers of infant mortality and morbidity.”

Angela said her honours project gave her a greater appreciation of how medicine works as a whole. “I learned what goes on ‘behind the scenes’ and what is involved in working towards finding a solution to common medical problems. It’s good to have both the clinical and research side of things in perspective.”

Angela said that doing an honours degree also helped her to develop confidence in presenting and writing skills. Although she is now embarked on a medical career, she would like to combine research in her future activities. She is keeping her options open for specialization, and she is considering women’s health as a result of her research in Dr. MacPhee’s lab.

“This knowledge is important because abnormalities in uterine contractions can cause preterm birth, a problem responsible for large numbers of infant mortality and morbidity.”
Faculty members support undergraduate students

It's common knowledge that there are medical, graduate and postgraduate students in the Faculty of Medicine. What's not so well-known is that an increasing number of undergraduate students are turning to faculty members to supervise their honours thesis.

John Adams is a fourth-year neuroscience student, who found Dr. Karen Mearrow’s website and liked what he saw. He worked in her laboratory last summer, and she is now supervising his honours thesis on the effect of heat shock protein on cortical cells treated with beta amyloid.

“The work I do in Dr. Mearrow’s lab is more biochemistry-based than what I do in class. It’s really taught me a lot.”

John's future plans are to apply to medical school, but if he isn’t accepted he will go on to do a master’s degree. Either way, his work with Dr. Mearrow has provided him with valuable experience.

Pilot project on eating disorders

Katrina Furness is a fifth-year honours student in biochemistry, but she also has a connection to the Faculty of Medicine. Like many other honours students, when she looked around for a supervisor for her thesis she looked outside the Department of Biochemistry.

She approached Dr. Natalie Beausoleil, Division of Community Health and Humanities, after reading her research interest portfolio. It was through a discussion with Dr. Beausoleil that the Eating Disorder Interprofessional Community Capacity Building Project (EDICCB) was mentioned as a potential project. Since Dr. Olga Heath was the chair of the eating disorder working group and was heading up this program, she was approached to be a co-supervisor.

The EDICCB pilot project was launched in late November 2008 in Corner Brook, and Katrina is helping to evaluate the project. “We’ll be holding focus groups with the health care professionals involved in the project,” she said. “It’s designed to train them to identify, prevent and treat eating disorders so we want to get their feedback to see what we need to change for the provincial launch in 2009.”

Katrina is enthusiastic about her experience with the EDICCB project, and would like to continue her studies in Community Health and Humanities through a master’s degree in public health.
Diet and stroke

Danika Kung is pursuing a joint honours degree in biology and psychology and also spending a lot of time in the research laboratory of Dr. Dale Corbett, Canada Research Chair in Stroke and Neuroplasticity. Under his supervision, she is writing an honours thesis on the effects of long-term consumption of a “Western diet” on the psychosocial, emotional and endocrine development in rodents.

Danika explained that the increase in fast and processed food in the western society has dramatically increased the consumption of fat, salt and sugar. “Chronic metabolic stress developed through poor diet paired with a sedentary lifestyle may lead to the dysregulation of cardiovascular and metabolic parameters. This is termed metabolic syndrome. This metabolic stress may increase stroke severity as well as limit the brain’s ability to ‘rewire’ (i.e. neuroplasticity) during spontaneous recovery or in response to rehabilitation.”

Danika’s study is focusing on metabolic syndrome in a rodent model. “In this study we will examine cognitive function, psychosocial behaviour and hormone feedback following long-term exposure to western diet. This study will also examine if chronic metabolic challenge alters the capacity to cope with stress.”

There are two goals of this research. The first is to develop a more representative model of stroke in the current clinical population. The second goal is to determine whether the rules for recovery after ischemic insult apply under metabolic syndrome conditions as they do in control conditions.

Danika said when she was searching for a honours supervisor, it was of upmost importance that she was interested in the research being carried out in the lab. “I was introduced to Dr. Corbett through his website where he described his work with stroke rehabilitation and brain plasticity, and was immediately drawn to the clinical relevance associated with his work. After doing some of my own research, I discovered that more than 50,000 strokes occur in Canada each year. I feel that by doing research with Dr. Corbett, I am helping to better the lives of those living daily with the effects of stroke. There is much work to be done in this field and great potential to reduce some of the disabilities associated with stroke.”

Although she loves research, Danika’s ambition is to be accepted to medical school and pursue a career in pediatrics.
Making Memorial a better place for Aboriginal students

A program of fundamental change in medical education programs and approach to Aboriginal communities and Aboriginal health is underway in the Faculty of Medicine.

An award of $187,500 over two years from the Aboriginal Health Human Resources Initiative Atlantic Region Competition will allow the Faculty of Medicine to develop a set of bridging programs, make revisions to the undergraduate medical curriculum, and reconfigure the faculty’s new master’s of Public Health Program to ensure cultural relevance and sensitivity.

Dr. James Rourke, dean of medicine, said this three-part program will bring Memorial to the forefront of the national effort to enhance the cultural sensitivity of health professional education and the presence of Aboriginal peoples in the country’s health professions.

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Memorial’s project will involve close collaborative development with First Nations, Inuit, Métis communities and health providers throughout Newfoundland and Labrador.

Dr. Michael Jong, full-time clinical faculty member in Happy Valley-Goose Bay, and Dr. Catherine Donovan, Division of Community Health and Humanities, are co-chairs of this project. Dr. Carolyn Sturge Sparkes has been hired as project co-ordinator.

Dr. Jong has worked for 26 years in Goose Bay, and has close ties with the Aboriginal communities of Labrador. He is in the process of broadening his connections with Aboriginal groups on the Island. Dr. Donovan led the development of the master’s in Public Health Program, and her expertise will help revise that program as well as lead in the revisions to the medical curriculum.

Dr. Sturge Sparkes has a PhD from McGill University in curriculum development and has worked with First Nations peoples in Quebec and other parts of Canada to determine ways to attract more students to pursue higher education.

At Memorial, her job will involve developing bridging programs to help the Faculty of Medicine reach out more effectively to the Aboriginal populations of the province. This includes an outreach program to increase awareness among Aboriginal high school students about the possibilities of a career in the health professions and raise their familiarity with Memorial’s Faculty of Medicine. It also includes planning to set aside two seats in the first-year medical class for Aboriginal students, and the reconfiguration of the admission criteria and the interview process in order to fill those seats. A mentorship program and tutoring facility will be introduced for successful Aboriginal applicants to ensure their success through the medical program, as well as special rotations in Aboriginal community settings to help link their medical education with their cultural background.

“I will also be working with others on the revision of the undergraduate medical program from a culturally sensitive position, in collaboration with community partners in the province’s Aboriginal organizations,” said Dr. Sturge Sparkes. “We want a medical education curriculum that is welcoming to Aboriginal medical students and ensures that other medical students receive an education that fully addresses the health, wellness and care needs of the province’s Aboriginal populations.”

Dr. Sturge Sparkes has already made contact with Aboriginal students at Memorial to discuss their concerns and what supports they need. In January the first advisory committee meeting for the Aboriginal health initiative was held with First Nations, Métis and Inuit representatives.

The proposed design of the new master’s of Public Health Program will include the examination and revision of the approach and content of existing courses that are part of the program, and culturally sensitive design of all the new courses developed. The program will also be designed to include at least one practicum opportunity in a First Nations, Inuit or Métis setting.

Dr. Donovan said that in addition to the proposed design changes for Memorial’s master’s in Public Health Program, the Faculty of Medicine has worked with the National Consortium on Aboriginal and Rural Public Health Education to adapt one or more of Memorial’s graduate courses for online delivery across the country and to promote enhanced access to public health education for Aboriginal students.
Leadership gift

The Frank and Pat Fagan Family Scholarship for Academic Excellence and Community Leadership is being established through a generous donation from Frank and Pat Fagan.

This new endowment will provide for a $5,000 annual scholarship award, the largest one in the Faculty of Medicine to date. The gift presentation took place Oct. 23, 2008. The gift was made through the Health Care Foundation and transferred to Memorial University to create the scholarship endowment.

This prestigious scholarship will be awarded annually to an academically outstanding student who has completed the preclerkship component of the MD program and who demonstrates a significant record of community leadership, prior to entry or during the medical program. Only residents of the province of Newfoundland and Labrador are eligible to apply. The scholarship will be paid out to the recipient in two installments, at the end of the second year and the end of the third year of medical studies.

Mr. Fagan said he and his wife, Pat, have spent their lives involved in community activities to enhance the lives of the people of the province of Newfoundland and Labrador. Mr. Fagan is chair of the volunteer board of directors of the Health Care Foundation. “As a family, we believe strongly in the importance of education as well as community involvement and volunteerism,” he said.

Frank, Pat and their two sons, Andrew and Richard, are graduates of Memorial University. Andrew and Richard are currently medical students. “We want to express our gratitude for the quality of education we all attained at Memorial University and the opportunities this has afforded us,” said Mr. Fagan.

Dean James Rourke said this leadership gift from the Fagan family will make a huge difference to medical students. “It is a remarkable award that will identify and recognize leadership and will set the recipients in good stead for their career.”

Frank Fagan received the 2008 Philanthropist of the Year award, presented Jan 26 at a luncheon of the Association of Fundraising Professionals. He was nominated by the Faculty of Medicine of Memorial University and the Health Care Foundation.
On Nov. 25 the annual Scholarship and Awards Luncheon for first and second-year medical students was held in the Junior Common Room, R. Gushue Hall. A total of 39 awards were presented, including two outstanding teacher awards and the first Dr. Kevin Keough Medical Entrance Scholarship.

Dean James Rourke brought greetings to donors and recipients and briefly described the upcoming expansion of the medical education program and research growth. Dr. Sharon Peters, vice-dean of the Faculty of Medicine, emceed the event.

First-Year Awards

Renelle Butt (L) received numerous awards including the Gina Blundon Memorial Scholarship, presented by Mrs. Alice Blundon. This scholarship is awarded by the Avalon Health Care Institutions Board to the student who receives the highest mark in cardiology. Renelle also received the Centennial of Responsible Government Scholarship, awarded annually to the most outstanding student in the class; and the Medical Practice Associates Scholarship, made available by the business association of all full-time clinical faculty members in the Faculty of Medicine and awarded to the student earning the highest grades in the first year of medical studies.

David MacDonald (L) received the Dr. H.D. Roberts Prize in Pharmacology, presented by Dr. Peters. This prize is funded by an endowment provided by Elizabeth Drugs Limited in recognition of the contribution made to the community and to the medical profession by Dr. H.D. Roberts. It is awarded annually to the student who has shown academic excellence in the field of pharmacology.

Dr. Jerry McGrath (R) was chosen by the Class of 2010 as their Outstanding Teacher. The award was presented by Jeremiah Stitham. Some of the qualities considered by the students in making these awards are: Comprehensive knowledge of the subject; preparation, organization, enthusiasm, effective communication and encouragement of student participation in the subject; sensitivity to student concerns, accessibility to students and providing constructive feedback to students; presenting a positive role model; and ability to motivate students for future learning.

Dr. Jonathan Kibble was selected by the Class of 2011 as their Outstanding Teacher, but was unable to attend the ceremony.

The Ryan Family Scholarship was presented to Erika Hansford (R) by Margaret Miller, development officer for the Faculty of Medicine. The value of this scholarship is now $1,000. It was established by Helen Ryan in memory of family members, Mary B.H., Thomas Sr., Thomas Jr. and Mary. It is awarded to the student who has shown academic excellence and financial need.
First-Year Awards

Mark Spurrell (L) and Marissa Chard (unable to attend) received John M. & Elsa S. Morgan Scholarships, presented by Dr. Gerard Farrell. These scholarships were bequested to the university by the late Dr. John M. Morgan and his wife Elsa S. Morgan. They are made on the basis of scholarship standing. Preference is given, where possible, to students from the Port de Grave District.

Lesley Doody (L) received the Dr. Wulf Grobin Memorial Scholarship, presented by Dr. Tanis Adey. This scholarship was established by Ida Parsons in memory of Dr. Grobin, a compassionate physician and humanitarian who practiced medicine in Brooklyn, Bonavista Bay from 1938-1943 and St. John’s from 1945-1958 when he moved with his family to Toronto. The selection is based on academic excellence and financial need.

Renelle Butt (L) and Lesley Doody received Surgery Prizes in Anatomy, presented by Dr. William Pollett, chair of the Discipline of Surgery. These awards are made available by the Department of Surgery and are awarded to the students who have obtained the highest grade in the anatomy course.

Gregory Jenkins (L) received the Opportunity Fund Scholarship, presented by Dr. Peters. This scholarship is the result of an endowment created from several general donations to the Opportunity Fund by various alumni and friends of the University and in particular of the medical school. The selection is based on academic excellence.

Chris Little (L) received the Dr. John M. Darte Memorial Award, presented by Dr. June Harris, assistant dean for Student Affairs. This award was established by Mrs. J.M. Darte and Mrs. Frances Darte McCabe in memory of Dr. John M. Darte, the first professor and chair of pediatrics at Memorial University. The selection is based on academic excellence and financial need.

Anna Sanderson (L) received the Dr. Leonard Miller Award, presented by Dr. Shree Mulay, associate dean of Community Health and Humanities. This award was established in memory of Dr. Leonard A. Miller and is funded by the Faculty of Medicine and the St. John’s General Hospital. It is awarded to the most outstanding student in Community Health.
Sarah Battcock (L) received the Rural Community Visit Prize, presented by Dr. Mulay. This prize is provided by the Division of Community Health and Humanities. The recipient is recommended by the Community Health Course Committee and is based on all essays and projects concerning the two-week rural community visit. Submissions are judged on the basis of originality, scientific merit, presentation and overall contribution to rural community health.

Colin Mercer (L) received the Walter Davis Award, presented by Amy Henderson of the Newfoundland Lung Association. This award was established by the Newfoundland Lung Association to honour the work of Walter Davis in the field of chest disease, particularly tuberculosis. This award is given to the student who achieves the highest grade in the respiratory component of the ISD-1 Course.

Hanni Bouma (L) received the Medical Practice Associates Scholarship, presented by Dr. Kara Laing. This scholarship is made available by Medical Practice Associates, the business association of all full-time clinical faculty members in the Faculty of Medicine. This is awarded to the student earning the highest grades in the second year of medical studies.

Alexandra Power (L) received the Dr. John M. Darte Memorial Award, presented by Dr. Gerard Farrell, assistant dean for Undergraduate Medical Education. This award was established by Mrs. J.M. Darte and Mrs. Frances Darte McCabe in memory of Dr. John M. Darte, the first professor and chair of pediatrics at Memorial University. The selection is based on academic excellence and financial need.

There were five recipients of Dr. Mary E. Pedersen Scholarships in Medicine, presented by Dr. Harris (C). Neal Manning (L) and Hanni Bouma were among the recipients. Unable to attend the ceremony were Sonia Fawcett, Kathryn Sparrow and Melanie Young. These scholarships are made possible by a generous donation from Dr. Mary E. Pedersen (Class of 1980). The selections are based on academic excellence.
Second-Year Awards

Renee Lester (L) received the Dr. J.B. Roberts Memorial Scholarship, presented by Dr. Farrell. Friends and colleagues of the late Dr. J.B. Roberts established this scholarship in his memory. The selection is based on excellence in clinical skills as determined by performance in the clinical skills course (OSCE).

Adam Hart (C) received the Morris & Graham Wilansky Memorial Award, presented by Percy Hoyles and Marguerite Hoyles. This award was established by the family and friends of Morris and Graham Wilansky, in their memory. The award is normally awarded to the student who has achieved highest academic excellence in the neuroscience course.

Kelly Hynes (L) and Yasir Khan (R) received Newfoundland and Labrador Medical Association Awards, presented by NLMA president Dr. Elizabeth Callahan. These awards are funded by the Newfoundland and Labrador Medical Association. Selection is based on potential interest in the organizational aspects of the profession of medicine as demonstrated by participation in leadership roles within the school.

Lori Shandera (L) received a John M. & Elsa S. Morgan Scholarships, presented by Dr. Tanis Adey. These scholarships were bequested to the university by the late Dr. John M. Morgan and his wife Elsa S. Morgan. They are made on the basis of scholarship standing. Preference is given, where possible, to students from the Port de Grave District.

Heather Power (L) of Point au Mal received the Dr. J.H. King Memorial Award, presented by Dr. Peters. This fund was established by Dr. King’s wife and children in his memory. The selection is based on academic excellence and the student must be a resident of the Western Newfoundland area.

Matthew Andrews (L) and Amanda Park (unable to attend) received Nicole Michelle Lane Cancer Research Scholarships, presented by Dr. Harris. These scholarships are provided through the generosity of the Candlelighters Association of Newfoundland and Labrador in memory of Nicole Michelle Lane. The scholarships are awarded annually to students who have undertaken the most outstanding summer research projects in the area of cancer and particularly in the area of pediatric cancer.

Awards made to students unable to attend

The Dr. Brian Gerard Adams Memorial Bursary Fund was awarded to Kathryn Sparrow. Family members Andrea Adams and Mary Adams were at the luncheon. This bursary was established by the friends and family of Dr. Brian Gerard Adams, in his memory. The selection is based on academic excellence and financial need.

The Pathology Prize was awarded to Alison Marr. This prize was established in 1984 by the members of the Discipline of Laboratory Medicine in recognition of the distinguished contributions to pathology and to medical education at Memorial University by Dr. S.N. Huang, a previous chair of the discipline. This prize is awarded to the student, whose performance in the general and systems pathology course, is considered by the members of the Discipline of Pathology to be most distinguished.
Robyn LeDrew (L) received the inaugural Dr. Kevin Keough Medical Entrance Scholarship, presented by Yui See Lau, son of Dr. Ming Lau (Class of 1982) who established this scholarship through a generous donation. The scholarship is named after Dr. Kevin Keough, who was Dr. Lau’s supervisor for his master’s thesis in biochemistry (1978). Dr. Kevin Keough should be remembered as a professor who believes in bringing out the best in his students and mentees. He has done this by his own example of forever challenging himself and by taking his mentees’ best interests to heart. This prestigious entrance scholarship is awarded annually to an academically outstanding student upon entry to first year studies in the Faculty of Medicine.

Danielle Colbourne (L) received the Dr. Andrew Bagby and son Zachary Andrew Memorial Bursary, presented by Dr. Peters. This award was initiated in memory of Dr. Andrew Bagby and his son Zachary by David and Kate Bagby, parents of Andrew. The award is presented to a medical student with an engaging demeanour who can relate with ease to people at all levels, as this was a unique characteristic of Dr. Bagby. The student is judged by their peers to have a positive, caring attitude fostering a sense of camaraderie within class life.

Dr. Monica Kidd (L) received the 2008 Gerry Lunch Memorial Scholarship, presented by NLMA president Dr. Elizabeth Callahan. This scholarship is awarded annually to a graduating medical student at Memorial University for the completion of a research paper on a medical/political topic. Gerry Lynch (1936-1994) served as executive director of the NLMA for 27 years. This scholarship’s focus reflects the contribution Mr. Lynch made to health care policy, both provincially and nationally.
Digitization collaboration

In the summer of 2008, the Faculty of Medicine Founders’ Archive partnered with the Association of Newfoundland and Labrador Archives (ANLA) in a project to digitize the ANLA Bulletins, which began publication in 1983. The years 1983-2005 were scanned and are now available on the Digital Archives Initiative website at http://collections.mun.ca/cdm4/browse.php?CISOROOT=%2Fanla

These bulletins document the history of the association and archives in the province since 1983, containing information about the activities of the organization, its members and the many archives throughout Newfoundland and Labrador. Workshops are noted and each issue contains several photographs of people and events. Bulletins from 2006 onward are available on ANLA’s website at www.anla.nf.ca/index.php

New exhibit on tuberculosis

The People’s Plague: A Brief Glimpse at Tuberculosis in Newfoundland and Labrador, is a new archival exhibit on display in the main foyer of the Faculty of Medicine.

The exhibit was launched Dec. 12, 2008, with representatives of the Newfoundland Lung Association, the Health Archives and Museum of Newfoundland and Labrador (HAMNL), and the Faculty of Medicine’s Founders’ Archive on hand.

The exhibit is a partnership between HAMNL and the Founders’ Archive. It contains photos and publications from the NL Lung Association, originally established in 1944 as the Newfoundland Tuberculosis Association. Their records were recently donated to HAMNL, and the fonds reflects the province’s long and hard struggle against tuberculosis, with records pertaining to the St. John’s and West Coast Sanatoriums, the Christmas Seals program, as well as the societal and administrative history of the association. The collection includes photographs, films, periodicals, annual reports, posters and a variety of other informative materials.
Dr. Shree Mulay
Associate dean
Division of Community Health and Humanities

Dr. Shree Mulay has joined Memorial University as the new associate dean of the Division of Community Health and Humanities. Prior to coming to Memorial, she was a professor in the Department of Medicine at McGill University and on staff at the Royal Victoria Hospital as the assistant director of the Endocrinology and Clinical Biochemistry Laboratories. She served as the director of the McGill Centre for Research and Teaching on Women from 1996-2007.

After completing her B.Sc. in chemistry (honours) at Delhi University in India, she earned her master’s and PhD degrees at McGill University in agricultural chemistry. Dr. Mulay’s basic research has been on role of hormones in the regulation of fetal development and electrolyte fluid balance during diabetic pregnancy. Her more recent research has focused women’s health; one such project investigated the experiences of women with non-surgical sterilization methods and their understanding of informed consent.

Dr. Mulay said she has taken on her new role in the Faculty of Medicine at an exciting time as both the faculty and the Division of Community Health and Humanities are expanding rapidly. She observed that the graduate programs in the division have a very large number of graduate students. In particular, she noted that the division introduced a new master’s program in Public Health last fall which makes all the division’s graduate programs put together the largest in the Faculty of Medicine.

Dr. Mulay’s own interests in women’s health and community health come together in her new position. “The Division of Community Health and Humanities has the opportunity to expand in scope and depth. The faculty are enthusiastic and I am glad to be part of this development.”

Dr. Mulay has published about 70 peer-reviewed scientific papers, several reviews and chapters in books. She has also written several op-ed pieces for newspapers and magazines on refugees and immigrants, and women’s health and new reproductive technologies. In 2007 she co-edited a book with Jackie Kirk on Women building peace between India and Pakistan, published by Anthem Press. She was a founding member of the South Asian Women’s Community Centre, started in 1981, and served in various capacities including president and treasurer. She serves on the board of Interpares, a social justice international development organization based in Ottawa. Dr. Mulay has been the recipient of numerous awards, including the 1998 YWCA Woman of Distinction Award for the Advancement of Women, the 1997 Prix Idola Saint-Jean from the Fédération des femmes du Québec, and the 2003 Humanitarian of the Year award from the Indo-Canadian Chambers of Commerce.

Dr. Cathy Vardy
Chair
Discipline of Pediatrics

Dr. Cathy Vardy (Class of 1983) has taken on the position as chair of the Discipline of Pediatrics. She has a long familiarity with the discipline, having worked in the Faculty of Medicine as a pediatrician with a special interest in behavioural problems since 1988.

Dr. Vardy said the faculty members in the Discipline of Pediatrics are really enthusiastic and work well as a team. “Right now we are looking at an expansion of our undergraduate and postgraduate teaching in line with the expansion of the medical school. The challenge in the next four to five years is to ensure we can maintain the quality of our teaching at both levels. We are also looking at expanding our research output and are in the process of hiring a research director and establishing a Pediatric Research Centre.”

Dr. Vardy continues to hold the position of assistant deputy registrar of the College of Family Physicians and Surgeons of Newfoundland and Labrador. While time management with her new administrative responsibilities is a concern, she enjoys working with the college and plans to continue to be involved.

Dr. Vardy has previously held a number of administrative posts with the Faculty of Medicine, including clerk co-ordinator and program director for pediatrics. From 1998 – 2005 she and Dr. Kim St. John shared the position of assistant dean for Postgraduate Medical Studies.
Dr. Victor Maddalena
Division of Community Health and Humanities

Dr. Victor Maddalena is an assistant professor in health policy and health service delivery in the Division of Community Health and Humanities. He received all of his academic training at Dalhousie University, including a BN(Post-RN), master of health services administration, and PhD.

Dr. Maddalena also completed two postdoctoral fellowships in the areas of innovative interdisciplinary capacity building through the identification, explanation, and applications of research for vulnerable populations at end of life; and palliative care in a cross-cultural context. In Halifax, he worked with the African Nova Scotian community and the southeastern Asian community. At Memorial he is hoping to do research with the deaf community to examine issues of access to health services.

“My research question has always been ‘Who is not well-served by the health care system?’” he explained. “My research interests are in the areas of ethics and governance, serving the health needs of vulnerable populations, and health human resources.”

Prior to joining the Faculty of Medicine, Dr. Maddalena was an assistant professor in the School of Health Administration at Dalhousie University with a cross-appointment in the Department of Community Health and Epidemiology. He is also a faculty member in the Atlantic Regional Training Centre, a co-operative master’s degree offered through Memorial, Dalhousie University, the University of New Brunswick and the University of Prince Edward Island. At Memorial he will also be teaching health policy in the new master’s in public health program.

Dr. Maddalena has held several positions in the health care system over the past 25 years including registered nurse in the Burn Unit of the Victoria General Hospital and the Intensive Care Unit at the Izaak Walton Killam Hospital for Children. He worked as a policy analyst in health human

resources for the Nova Scotia Department of Health from 1988 to 1991. From 1991 to 1995 he served as administrator of Sacred Heart Hospital in Chéticamp, a community hospital in rural Nova Scotia. During the period from 1995 until 2000 he served as the chief executive officer of the Western Regional Health Board. He has served as a consultant to government agencies and health organizations on a wide range of health policy issues, including strategic planning, health human resources policy, primary health care and health systems.

Dr. Maddalena is a member of the editorial advisory board for Leadership in Health Services. He has taught graduate level courses in ethics and decision-making, strategic planning, health policy and quality management.

Dr. Yanqing Yi
Division of Community Health and Humanities

Dr. Yanqing Yi brings strength in statistical design and analysis to her new position as assistant professor in the Division of Community Health and Humanities.

Dr. Yi earned her PhD in statistics from the University of Manitoba. Her dissertation was on the design and statistical inference of response adaptive clinical trials. She holds two M.Sc. degrees, one in applied mathematics from Central South University, China (original Changsha College of Railway), and another in statistics from the University of Manitoba.

During her graduate studies at the University of Manitoba, she published seven peer-reviewed papers in statistics and received several awards including a University of Manitoba Graduate Fellowship and the Clarence Bogardus Sharpe Memorial Scholarship.

She has been a member of the Statistical Society of Canada since 2005. Before she came to Canada in 2002, Dr. Yi was a university professor in several universities in China with 12 publications in applied science.

Dr. Yi’s research interests include statistical design and analysis for clinical trials, dependent data analysis, survival data analysis, stochastic modeling and Markov processes, and statistical modeling and computation for complex data.
**New faculty**

**Dr. Sevtap Savas**  
**Discipline of Genetics**

Dr. Sevtap Savas brings strengths in genetic cancer research and computational analyses to the Discipline of Genetics. Her research program in human genetic disease involves single gene disorders and cancer, where genetics plays a role in susceptibility, treatment response (pharmacogenetics), and disease prognosis and survival. She is also interested in computational data analysis and establishment of public databases.

Dr. Savas said the unique genetic structure of the Newfoundland population attracted her to work in this province as well as the scientifically well-established members of the Discipline of Genetics at MUN. “I am truly thrilled to be a part of the Discipline of Genetics at MUN and looking forward to contributing to their scientific and academic success,” she said.

Dr. Savas has previously worked on breast and head and neck cancers, childhood onset spinal muscular atrophy (SMA), and the Acadian Usher type I syndrome. Dr. Savas completed her PhD in molecular biology and genetics at Bogazici University, Turkey, in 1999. She trained as a post-doctoral fellow/research associate at the Louisiana State University in the U.S., at Mount Sinai Hospital Research Institute and the Ontario Cancer Institute at Princess Margaret Hospital in Toronto.

In addition to her academic and work experience, Dr. Savas has a certified associate in project management (CAPM) credential from the Project Management Institute.

**First full-time director for HSIMS**

**Sean O’Neill**

As the Faculty of Medicine goes forward with the process of curriculum expansion and enhancement, the service role of Health Sciences Information and Media Service (HSIMS) is becoming increasingly important. Sean O’Neill was recently appointed as the first full-time director of HSIMS, taking over from associate librarian George Beckett who served in this role for many years as part of his faculty duties.

Sean is originally from Labrador City and returns to Memorial from Grande Prairie Alberta where he was regional manager in the Department of Information Management and Technical Services at Peace Country Health Region in Northwestern Alberta. In that position he was responsible for a $4 million per year information technology and multimedia department.

Sean earned a B.Sc. degree in biochemistry from Memorial in 1989, working part-time and then full-time at the medical school for Drs. Chris Triggle and Gordon Bolger as a research assistant. In 1990 he followed Dr. Triggle to the University of Calgary, where he helped implement eight new laboratories to form a Smooth Muscle Research Group.

As his interest in technology and computers grew, Sean became the systems and network administrator and combined this role with a growing expertise in telehealth. In 1998 he left Calgary for a position in Slave Lake, Alberta, where he was responsible for telehealth in three rural remote northern Aboriginal communities.

Distance learning technologies allow medical students to gain experience in rural areas while still participating in lectures and academic half days. “With modern technology we can support our students and faculty wherever they are located,” said Sean.

All areas of HSIMS are expanding. Graphic artist Jennifer Armstrong joined HSIMS last year to supplement the services offered by Sylvia Ficken. Stephen Pennell was recently promoted to manager of health education technology and learning; a senior instruction designer will soon be hired, bringing the strength in this area to three people with Moya Clarke as instructional design assistant. In computer support, Glen Brophy and Chad Lawlor have been hired, expanding HSIMS resources greatly in this area.

“HSIMS combines information technology, multimedia and instructional design,” said Sean. “These three fields are converging and the result will be a greatly enhanced capability to support the Faculty of Medicine’s technology needs.”

Dr. Sevtap Savas  
Discipline of Genetics  

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In addition to her academic and work experience, Dr. Savas has a certified associate in project management (CAPM) credential from the Project Management Institute.
The Noah Curtis Godwin Lloyd Endowment Fund has been established to provide financial support to the Noah Awards.

The Noah Awards are in memory of Baby Noah Lloyd who was born on April 6, 2008 and died two days later on April 8, 2008 of septicemia from a small bowel volvulus. The Godwin and Lloyd families have established this award in memory of Noah and to provide support for three awards that focus on primary health care:

- **The Noah Scholarship** will be awarded to a medical student, resident, or graduate student in a health related discipline, who is planning a career in a primary health care discipline.

- **The Noah Research Award** will be awarded to a researcher in a primary health care discipline.

- **The Noah Education Award** will be awarded to an educator in a primary health care discipline.

The award winners must have succeeded through hard work and perseverance, and display humility and gentleness of character in approaching work and life.

Noah Curtis Godwin Lloyd was born to Jane Elizabeth Godwin, daughter of Noah Marshall Stewart Godwin and Glenda Joan Godwin (nee Buglar), and Matthew Curtis Robert Lloyd of Kingston. Baby Noah was the third in a line of Noahs. His grandfather was Noah Marshall Stewart Godwin and his great, great, grandfather was Noah Vallis who drowned in 1940 in the schooner fishery on the Grand Banks.

**FOR FURTHER INFORMATION** and to make a gift in support of The Noah Awards:
Call (709) 777-8289 or go to
www.med.mun.ca/Medicine/DonateToMedicine.aspx

**UPDATE**

**Thousand Thousands Challenge**

The Thousand Thousands Challenge is the Medical Graduates' Society Annual Leadership Giving Program. It’s the way our most loyal alumni join together to demonstrate their support with a recurring annual gift of at least $1,000. The ultimate goal is for 1,000 medical alumni to donate at least $1,000 each and every year so that we can raise over one million dollars annually in support of the Faculty of Medicine.

Right now the Thousand Thousands funds are building the endowment for the Dr. Ian Rusted Founder’s Chair in Medical Education, a new faculty position to develop and apply advances in the field of medical education as we expand our medical school. After this goal has been achieved, the Thousand Thousands will be used to fund further academic goals as decided by the Medical Graduates' Society Board.

**HOW ARE WE DOING?**
Since the launch in 2005 a total of $114,000 has been given and a large portion of this has been in the past year. The Thousand Thousands is catching on and we want you to be a part of it!

**WHAT’S NEXT?**
In 2009 we are asking for one volunteer from each of the classes of 1973 to 1999 to serve as the Thousand Thousands class chairperson. Are you willing to be your class contact and help us to increase participation in the Thousand Thousands Challenge? Can you send some emails or make some phone calls to your classmates? A little bit of your time could have a big impact on our success!

If you would like to help, let us know!
Call Margaret Miller at 709-777-8289 or e-mail mmiller@mun.ca
Infrastructure for a province-wide heritability database is now in place, and guidelines are being established regarding privacy and ethics. The Heritability Analytics Infrastructure (HAI) and associated customized linkage software (KINNECT) will aid genetic researchers in performing pedigree linkages and genetic analysis.

This project is part of the Canadian Century Research Infrastructure (CCRI). It has the potential to greatly facilitate genealogical research by providing accurate, timely and inexpensive family links.

The Population Therapeutics Research Group (PTRG), funded through the Atlantic Canada Opportunities Agency (ACOA) and led by Dr. Proton Rahman (professor of medicine) is working with the CCRI team to develop a province-wide heritability database that can be used to reveal genealogical links among individuals with a particular disease.

Newfoundland’s population has mainly developed from a founder population of approximately 20,000–30,000. Discovering essential genealogical links may help clarify the genetic basis for transmission of a disease, effectiveness of a drug therapy and the potential for adverse reactions to treatments.

In the past, health researchers looking for genetic links for a particular disease – especially if it was rare – would spend years visiting residents in small communities, searching through church records, and exploring the Provincial Archives. This process was expensive, time consuming and at times incomplete.

This infrastructure will be a unique provincial asset, as the pattern of migration and isolation that existed in the past has resulted in Newfoundland being recognized as a unique founder population.

In addition to the development of the province-wide heritability database, Astrid Perrot-Daley, the PTRG’s informatics lead, has developed the HAI and KINNECT which together will allow researchers to identify relationships and therefore possible genetic links between people who may previously have been thought to be unrelated.

Knowing that two seemingly unrelated patients with a similar disease share a common ancestor can be a clue that leads to exposing the genetic basis of disease. Using the relatedness database offers better protection of patient privacy than the current research methods. Instead of a researcher visiting community members or the archives, unidentifiable information can be placed in a computer program along with other family and demographic information. The program compares this data to the CCRI dataset and determines the probable degree of relatedness and potential common ancestors.

To ensure the processes developed by the PTRG meet current guidelines regarding privacy and ethics, the development of the HAI has been taken forward in close liaison with Dr. Daryl Pullman, professor of medical ethics, and has been discussed with the Human Investigation Committee.

The HAI does have some data limitations but work is planned to address these limitations. One such limitation, for example, is accessing other data sources such as Vital Statistics information.

In addition to housing and developing the HAI, the PTRG through the work of Mitch Sturge (systems administrator) and Mohammed Uddin (PhD student) is working to develop the software and technical skills required to allow researchers to integrate their genetic, phenotype and pedigree data into one centralized database. This will enable researchers to carry out the required analysis using a range of software tools.

The analysis of genetic research information will be a service the PTRG aims to offer to MUN researchers in early 2009. A presentation on the work of the HAI and how the analytical tools operate is available. Anyone interested in learning more about the work of the PTRG and the opportunities offered by the HAI and associated software applications should contact, Catherine Street, PTRG project manager, at catherine.street@med.mun.ca.

Further information regarding the work of the PTRG may also be found on the team’s website located at www.med.mun.ca/ptrg/home.aspx.
Human simulator helps test automated CPR device

Flight specialists, police sergeants, firemen and paramedics crowded into the Medical Simulation Unit of the Faculty of Medicine recently for a demonstration of a new automated CPR device on the human patient simulator STAN (standardized man).

Attending a demonstration of an automated CPR device on Dec. 12 were (from left): inventor Paul Morrissey, paramedic Ian Winter, medical flight specialist Noreen Molloy, RNC Sgt. Junior Small, Jan Hadden with the St. John’s Ambulance, RNC Inspector Jim Carroll, Brian Smith with St. John’s Ambulance, RNC Inspector Ab Singleton and Derrick Chafe with the St. John’s Fire Department.
STAN’s physiology allows him to be a research subject as well as a teacher. “When Medical Enhancement Systems Inc. was looking for a patient to try its automated CPR Device, STAN was a good choice as a patient model,” said Ed Evelly, manager of Medical Education and Laboratory Support Services. “The Faculty of Medicine agreed to use its STAN as the test patient for the automated CPR device and STAN has been able to recreate a unique research environment for this emerging technology.”

Dr. Michael Hinchey of Memorial’s Mechanical Engineering Department has been working with local inventor Paul Morrissey to bring an automated CPR device to reality. Rapid progress was made last summer when work term student Jonathan Smith became involved with the project.

“CPR might seem effortless to someone who has never done it,” explained Dr. Hinchey. “However, to do it on a normal person, around 100 pounds of force must be applied to the chest. It is a very demanding task, and the person applying it quickly becomes exhausted.”

The automated CPR device uses a pneumatic piston or air pump to generate the 100 pounds of force needed. “The CPR pumping action is controlled by a small battery powered computer or integrated circuit topographies which allow several functionalities to take place. The device can also be controlled manually using a simple backup system but because of intellectual property rights this system cannot as yet be made public,” said Dr. Hinchey. “A pressure regulator is used to adjust the amount of force generated. Presently, the maximum is around 115 pounds. It can be set anywhere between 0 and 115.”

The demonstration at the medical school in December was arranged by Mr. Morrissey in co-operation with Luke Grenning, who runs the medical school’s Surgical Research Laboratories and Medical Simulation Unit. “It was a breakthrough moment to see first hand the unit performing so well on STAN at the medical school,” said Mr. Morrissey.

The idea for the CPR mechanical device came to Mr. Morrissey several years ago when he witnessed ambulance and fire department personnel administer CPR on a crucially injured victim on a west end street in St. John’s. “Within five minutes of driving away I could mentally see a much easier way of performing such a laborious task.”

Dr. Hinchey said that all the pneumatic components used in the CPR device are off the shelf. “We are presently using components manufactured by the German company FESTO. These are very high quality and are designed to be used in factories on a continuous or non-stop basis. Use of these components makes our device very reliable.”

The CPR device uses a small SCUBA air tank and its regulator to supply the compressed air needed to operate the device. “The tank lasts about 10 minutes,” said Dr. Hinchey. “It is lightweight, and spares can be easily carried. This makes our unit highly portable. In an ambulance or hospital, one could switch over to a much larger bottle.”

Parts of the device are currently attached to an aluminum horseshoe-shaped frame that slides under the patient. The plan is to make this frame plastic. The frames are made by Technical Services in the Faculty of Engineering at Memorial. “The bits are cut out using its water jet cutter and then welded together”, explained Dr. Hinchey. “We are also developing a version of the device that resembles a flak jacket. This has a chest plate and a back plate, both made from aluminum. The air pump is attached to the chest plate. Straps are used to tighten the plates onto the patient.”

A drawback of the jacket device is the patient must sit up to put it on. The horseshoe device can slide under a patient and be operational in around 30 seconds. “We have tried to make the device as simple as possible and require little or no assembly,” said Dr. Hinchey. “Obviously, when someone is having a heart attack, time is of the essence. There is no time for assembly or reading instructions. It has to be obvious how the device works. Presently, all one needs to do, after sliding the device under the patient, is turn on the air supply and press a button to start the controller. The controller has a knob for controlling the number of pumps or beats per minute.”

Mr. Morrissey has a patent pending on the device and has agreed to give Memorial 25 per cent of profits from sale of the device when it goes to market later in 2009. He anticipates an enormous commercial market for the device for use in hospitals, ambulances, airports, sports arenas and even in home residences. He expects it will sell for below $5,000 per unit and will be manufactured locally.
Awards ceremony honours physicians and researchers

An awards ceremony was held during the 2008 Fall Medical Education Forum, held in Corner Brook Sept. 17-20. The Fall Medical Education Forum combines the Discipline of Family Medicine’s Community Preceptors’ Meeting (sponsored by the Faculty of Medicine) with the Annual Scientific Assembly of the Newfoundland and Labrador Chapter of the College of Family Physicians of Canada.

The following awards were presented to physicians.

Dr. Judy Ophel, right, Labrador Health Centre, Happy Valley-Goose Bay, was named the Family Physician of the Year. The award was presented by Dr. Pauline Duke.

Dr. Rick Cooper, left, accepted the Dr. Craig Loveys Teaching Award from Dr. Bill Eaton. This award is given annually by the Discipline of Family Medicine to a specialist in recognition of excellence in teaching family medicine residents.

Dr. Yordon Karkivanov, Labrador Health Centre, Happy Valley-Goose Bay, received the Dr. Yong Kee Jeon Award, presented by Dr. Bill Eaton. This award is given annually to a family physician for excellence in teaching family medicine residents.
Dr. Anthony Gabriel, right, Gander, was honoured with a plaque from the College in recognition of his outstanding contribution to the Newfoundland and Labrador Chapter of the College of Family Physicians of Canada. It was presented by Dr. Robert Boulay, a physician from Miramichi, N.B.

Dr. Wendy Graham, right, Port aux Basques, received an Award of Excellence from the Newfoundland and Labrador Chapter of the College of Family Physicians of Canada. It was presented by Dr. Mohamed Ravalia, Twillingate.

Dr. Jody Woolfrey, Botwood, received an Award of Excellence from the Newfoundland and Labrador Chapter of the College of Family Physicians of Canada. It was presented by Dr. Lynette Powell, a physician in Glovertown.

Primary Care Researcher of the Year Award goes to nursing team

The 2008 Primary Care Researcher of the Year Award went to the Community Health Assessment Team (CHAT) from Memorial University's School of Nursing.

The award from the Faculty of Medicine's Primary Healthcare Research Unit was presented to team member Dr. Sandra MacDonald at the annual meeting of the Atlantic Practice Based Research Network, held in conjunction with the annual scientific assembly of the Newfoundland and Labrador Chapter of the College of Family Physicians of Canada.

The CHAT team has been working together for the past 15 years, conducting regional community assessment studies across the island and in Labrador. CHAT is a five-member team with experience in community health needs and resources assessment, epidemiology, program evaluation, cardiology, community and family health, adult health and mental health. In addition to Dr. MacDonald, the team members are Donna Best, Judith Blakeley, Lorna Bennett and Creina Twomey.

CHAT’s most recent project took place in western Newfoundland. The Community Health Needs and Resources Assessment looked at health benefits and practices, satisfaction with existing health and community services, and community issues and concerns.

Using a population health approach to guide their research, the team worked closely with the regional health and community authorities to involve communities in the strategic planning of future services and programs.

Over 2,000 households participated in the research, representing over 6,000 Newfoundlanders and Labradorians, and more than 60 key informant interviews and 30 focus groups were conducted. The findings from the studies have been used by senior management teams and the governing authorities to help them make decisions about the future strategic directions for services and to develop policies and programs aimed at improving the health status of specific populations within the regions.

The team has presented their findings at regional, provincial, national and international conferences and published excerpts from the studies in national journals. “It is interesting to note that here in the western region, the study is currently being repeated and as we speak the findings are being discussed by the senior management team of Western Health,” said Dr. MacDonald.
The Dr. Nigel Rusted Lectureship in Medical Humanities

Architecture and the modern hospital

Using designs of children’s hospitals as illustration, Dr. Annmarie Adams presented an intriguing look at architecture and the modern hospital during the 2008 Dr. Nigel Rusted Lecture in the Medical Humanities on Nov. 14, 2008.

Dr. Adams is the William C. Macdonald Professor at the School of Architecture at McGill University. Her most recent book is *Medicine by Design: The Architect and the Modern Hospital, 1893-1943*.

Dr. Adams focused on atriums in hospitals, built as a way to reduce fear in children. The Evelina Children’s Hospital in London, England, moved to a new building in October 2005. Built around the patient’s perspective rather than the doctor’s, the design features colour, light and fun. Bright red rocket lifts, clearly visible from inside and outside the hospital, carry people to a four-storey central conservatory. Dr. Adams said that even the window washer is always dressed as Spiderman.

“Around 1980 children's hospitals began to look like places other than hospitals. The atrium is a place of distraction, often designed to look like a mall.”

Postmodern hospitals, said Dr. Adams, are built around patient-centred care and have a human scale with decoration and whimsy part of the design.

At Toronto’s Hospital for Sick Children, Dr. Adams and colleagues explored the interaction of children and public space in the hospital’s atrium to gauge the reaction to the new design. Children commented that the atrium feels “wide-open and free, like you’re not closed up.” One child commented that it is nice to look out the windows of the atrium even when it is stormy.

Dr. Adams is a strong advocate of reusing rather demolishing hospitals. She said that age alone is no reason to abandon a hospital.

Dr. Adams is author of *Architecture in the Family Way: Doctors, Houses, and Women, 1870-1900* (McGill-Queens University Press, 1996), which was awarded the Jason A. Hannah Medal from the Royal Society of Canada in 1999 as an outstanding contribution to the history of medicine.

Dr. Nigel Rusted attended the lecture, and commented at the end that doctors need to have interests, such as architecture, outside their specialty.

Pioneering immunologist delivers 2008 Gairdner lecture

The 2008 Gairdner Lecture took place Oct. 20 and was delivered by Dr. Emil Unanue, who is the Paul & Ellen Lacy Professor in the Department of Pathology & Immunology at the Washington University School of Medicine in St. Louis.

Dr. Unanue spoke on “The shaky process of discriminating self from foreign in immunological relations.” As an internationally recognized immunologist and a pioneer in the area of how the immune system identifies foreign material, Dr. Unanue’s work continues to help scientists gain insights that may one day be used to improve the body’s defenses against diseases.

During his 23-year tenure at the Washington University School of Medicine, the immunology program has become one of the most innovative and productive centres in the world for immunological research.
Dr. Sue Hopkins, Class of 1980, is a professor in medicine and radiology and director of the Pulmonary Imaging lab at the University of California in San Diego. That’s her day job.

But at night she’s an award-winning artist, and the influence from the time she spent in Newfoundland is evident in her traditional watercolours and watercolour monotypes.

“About 80 per cent of my work is influenced by images from the east coast and Newfoundland,” she said.

Since Dr. Hopkins paints in the evening, she works almost exclusively from one or more of her own digital photos. “I try to compose the finished work as much as I can within the photograph, although often a finished piece will be a composite of several images.”

The process starts with a very detailed drawing on sketch paper, which she then transfers on to watercolour paper using a light table. “I feel that the drawing is the most important part of my painting, and I do not project slides and trace them to facilitate this process,” explained Dr. Hopkins. “I paint representational watercolours and I like to paint as large as possible, up to 29” by 40”.

Dr. Hopkins said her medical training has given her a very strong foundation in anatomy and the observation of human behaviour, which assists her with portraits and human figure painting. Other influences come from her childhood. “As a kid living in Quebec, I loved the colours of the rocks stuck in the asphalt that emerged every spring as the snow started to melt and the water ran down the street. Later we moved to the coast and I translated this into the rocks around, in and under water.”

Dr. Hopkins also paints using a technique known as monoprinting. “Using the drawing as a guide I paint directly on plexiglass using watercolour paints. These images are hand transferred into watercolour paper using a rolling pin. The paint transfers in unusual ways and the colours are bright, vibrant and fun.”

During her time as a medical student at Memorial, Dr. Hopkins particularly remembers having a great time doing Acta Path with Paul Bragg, Greg Archibald, Bruce Short, Paul Wadden, Gary Condon, and many others.

But she didn’t paint during the time she was a medical student. “I had applied to do fine arts at Mount Allison University at the same time I applied to med school at Memorial. I was one of the ‘babies’ that were accepted after second year, so I hadn’t really planned things well. I didn’t get into Mount A and I was quite disappointed and stopped painting altogether for several years. About 10 years later a friend’s mother signed me up for an art class, and I started painting again.”

For further information on the paintings of Dr. Sue Hopkins, visit her website at www.suehopkins.com.
The benefits of residency training in Newfoundland and Labrador

As past-president of the Professional Association of Interns and Residents of Newfoundland (PAIRN), Dr. Mairi Chadwick, a third-year resident in anesthesia, is quick to list off the many advantages of staying in Newfoundland for residency training.

Top on her list is the low student to staff ratio. “This allows for lots of individualized bedside teaching, strong relationships between residents and staff, and teaching environments more like those of junior staff. As well, the low ratio of fellows to chief residents in our programs gives us valuable exposure to rare and interesting cases at every level of training, and not just in the later years.”

Dr. Chris Smith, a fourth-year resident in general surgery and current president of PAIRN, added that because of the faculty’s small size, there is an atmosphere of interdepartmental collegiality.

Dr. Chadwick said there are also many financial advantages for residents who do their training in the province. “There are financial advantages because residents maintain student status and that means we don’t have to pay off our Newfoundland student loans during residency,” she points out. “Also it allows us to claim back the income tax we pay on our salaries. And as a full-time student you can claim a certain amount for housing and books and that allowance makes a big difference.”

Another benefit is that even though residents must pay tuition as “students,” that is returned in the form of a non-taxable bursary.

Dr. Chadwick said a further benefit to staying in the province is that Eastern Health reimburses residents for the successful completion of the Medical Council of Canada Qualify Exam Part II, a $1,500 exam. “And at Memorial we get back the approximately $1,200 a year we pay for medical malpractice. Memorial is one of the few places in the country where this is reimbursed, so that’s another bonus.”

And there are further benefits. “In Newfoundland and Labrador, after completing the first year of internship in certain programs, if you do a rotating internship you can work in emergency or outside town, doing locums anywhere. It’s a way to make extra money, and that’s an advantage Newfoundland and Labrador offers that many provinces don’t. It helps to relieve all the overworked family medicine doctors, gives us a rural experience and helps keep up and further develop our skills.”

Dr. Chadwick said she stresses to medical students that there are educational and financial incentives to staying in the province.

“For example, the cost of living here is lower. Housing is cheaper here, often much cheaper. And take the cost of parking! At the hospital we pay only $5.75 a year while a friend of mine in another province is paying $100 a month!”

Dr. Chadwick said recruitment efforts among residents at Memorial are increasing. “Every year there are recruitment fairs organized by Scarlet Hann – she is excellent at hooking students up with contacts in the area of the province they are interested in. She is such an asset to the medical community in Newfoundland and makes such an effort to help medical students and residents.”

The past-president of PAIRN would like to see even more effort put into recruiting graduates to Newfoundland both here and in other parts of Canada. “Many residents, once they’ve come to Newfoundland and Labrador, realize they would love to work here.”
Focus on recruitment

“It’s an established fact that people from the province who train here as doctors tend to stay here. So our main emphasis now is on keeping Newfoundland and Labrador graduates in the province.”

The Newfoundland and Labrador Health Boards Association (NLHBA) is a provincial volunteer association made up of the four regional health authorities – Eastern Health, Central, Western and Labrador-Grenfell.

Driven by the needs of its membership, the NLHBA is responsible for recruiting physicians in the province, other parts of Canada and internationally. “Initially the funding for this initiative was from the nine health authorities we had at the time,” explained John Peddle, executive director of the NLBHA. “At that point the main focus was on recruiting international medical graduates. We had little or no focus on Memorial’s medical school.”

Mr. Peddle said Newfoundland and Labrador has done well by international medical graduates. “But if you look at all the research, it’s an established fact that people from the province who train here as doctors, tend to stay here. So our main emphasis now is on keeping Newfoundland and Labrador graduates in the province. We still have to look to international medical graduates to fill in the gaps when people leave, but our main focus is on keeping our own students here.”

While the focus of the NLHBA’s effort is on physician recruitment, Mr. Peddle commented that retaining physicians involves building a relationship between the physician and the community. “It’s a never-ending battle. There are now interest groups in various communities around the province that do everything they can to welcome the new physician into the community. A lot is family-related – there’s no point in bringing a physician into some part of the province unless that person’s spouse and children can be accommodated.”

Mr. Peddle said that part of the physician recruitment program involves developing orientation programs and packages. “We are in the process of developing very detailed orientation packages that can be adapted to different areas.”

Another aspect of physician recruitment is maintaining contact with MUN med alumni who want to return to the province. “We do whatever we can to attract physicians to stay or to come back. There’s no one solution that fits all, in many cases you have to find out the needs of the physician and try to meet those needs.”

Physician recruitment for Newfoundland and Labrador is a continuous process, said Mr. Peddle. “We will continue the programs we have. At first it was hit or miss and now it’s continuous – advertising internationally and keeping in regular contact with MUN residents and graduates.”
Obesity genes identified

A professor of genetics in the Faculty of Medicine has discovered 45 genes involved in gaining weight. Dr. Guang Sun’s research was published on Jan. 5 in the electronic version of the American Journal of Clinical Nutrition, in a paper titled “Changes in the transcriptome of abdominal subcutaneous adipose tissue in response to short term overfeeding in lean and obese men.”

This paper is the first of its kind in the field of obesity study in the world. The findings are from a study in the laboratory of Dr. Sun, funded by the Canadian Institutes of Health Research.

Dr. Sun said that obesity or uncontrolled weight gaining is the result of chronic positive energy balance or overfeeding. “It is critical to mimic the overfeeding process to be able to find the genes involved,” he explained. “However, so far all studies used the opposite approach: negative energy challenge including diet and exercise. The main reason is the difficulty to persuade volunteers to gain weight instead of losing weight.”

Dr. Sun’s study combined the power of the whole human genome DNA microarrays with seven days of overfeeding. “We discovered for the first time 45 genes induced by overfeeding, and six genes displayed a significant interaction effect between adiposity status and overfeeding treatment. These genes may represent a protective mechanism at the molecular level in lean subjects in response to an energy surplus, and they represent valuable candidates for downstream studies related to obesity.”

The 45 genes identified in Dr. Sun’s study are involved in a wide variety of biological processes known to be implicated in the development of obesity, including the immune response, lipid metabolism and energy production.

Dr. Sun said the information obtained from this study will provide insights into the genetic targets responsible for individual differences in weight gain. The first author is Jennifer Shea, a PhD candidate in Dr. Sun’s laboratory. The other authors are Curtis R. French, Jessica Bishop, Glynn Martin, Barbara Roebrothan, David Pace, Donald Fitzpatrick, and Guang Sun, the senior author.

Clinical Epidemiology Practice and Methods

Edited by Patrick Parfrey and Brendan Barrett

Clinical epidemiology provides the scientific basis for the practice of medicine because it focuses on the diagnosis, prognosis and management of human disease.

Drs. Patrick Parfrey and Brendan Barrett, Faculty of Medicine, are leaders in the field of clinical epidemiology. They have brought together a collection of 18 articles that examine issues of research design, measurement and evaluation critical to clinical epidemiology. The book is intended to educate researchers on how to undertake clinical research and is directed to both medical practitioners and basic scientists who want to extend their work to humans. The book is also of value to allied health professionals interested in scientific evaluation and to trainees in clinical epidemiology.

The collection of articles in Clinical Epidemiology provides advice on framing the research question and choosing the most appropriate research design. It discusses the basics of clinical epidemiology as well as the use of biomarkers and surrogates, patient-reported outcomes and qualitative research. It also provides examples of bias in clinical studies, methods of sample size estimation, and an analytic framework for various research designs.

There are also practical chapters on research ethics, budgeting funding and managing clinical research projects.

Of the 27 authors and co-authors of the articles in Clinical Epidemiology, 14 are associated with Memorial University. Clinical Epidemiology is published by Humana Press.
Bruno Stuyvers’ goal is to save thousands of Canadians who suffer a heart attack; many of those in Newfoundland and Labrador where the rate of heart attacks is the highest in the country. Dr. Stuyvers is one of three Faculty of Medicine researchers benefiting from the latest round of Canadian Foundation for Innovation (CFI) awards.

Dr. Stuyvers was awarded $100,000 for the project to develop a high-performance live cell imaging setup to understand the development of lethal arrhythmias associated with heart attacks. Dr. Jackie Vanderluit also received a $100,000 CFI award for her project on the role of cell survival genes in promoting neural regeneration. Dr. Rod Russell was awarded $96,154 for the project viral and cellular determinant of hepatitis C virus assembly. These three projects were among 11 infrastructure projects funded at Memorial for a total of $1,126,608.

According to Dr. Stuyvers, cardiovascular diseases accounted for about 75,000 deaths in Canada in 2002 with 54 per cent due to myocardial infarctions. Dr. Stuyvers will use his CFI funding to try and understand the development of lethal arrhythmias associated with heart attacks.

“People going through a severe heart attack, or myocardial infarction, show a high risk for a lethal type of arrhythmias called polymorphic ventricular tachycardias or PVTs,” he explained. Because the PVTs frequently lead to ventricular fibrillation, a stage where the heart is unable to pump the blood anymore, these arrhythmias are the primary cause of death during or shortly after heart attacks.”

By understanding the reasons that cause the PVTs, Dr. Stuyvers and his team hope to help in the design of specific anti-arrhythmic drugs and new emergency procedures.
An alliance has been formed between Memorial University, a St. John’s company and a Boston company which will see a diagnostic test, important to many in Newfoundland and Labrador, brought to the marketplace.

Arrhythmogenic right ventricular cardiomyopathy (ARVC) is a deadly genetic heart condition, prevalent in a number of Newfoundland and Labrador families, which kills young people without any prior warning. Earlier in 2008, researchers at Memorial University announced a significant genetic breakthrough: the discovery of the gene responsible. Now, there is more good news. The genetic test for this condition is about to be made available around the world.

At the American Heart Association Conference in New Orleans Nov. 8-12, it was announced that the Newfoundland-based company, Newfound Genomics, will provide diagnostic services related to ARVC to eastern Canada. The Boston-based company PGxHealth Ltd will provide the service to the rest of the world through its U.S. based testing centre and its global network of service providers.

The St. John’s based company, Newfound Genomics, is the dominant private sector player in human genetics and genomics in Newfoundland and Labrador. It has entered into an agreement with the Genesis Group, the technology commercialization arm of Memorial University, to pursue a program of collaborative research and to bring the potential pipeline of promising discoveries to market. ARVC is the first technology to be commercialized.

Dr. Terry-Lynn Young, the lead genetic researcher at Memorial said, “Since the announcement in February 2008 I have been struggling to respond to the demand for ARVC testing by concerned patients just in this province as I only have research capacity equipment. I am delighted that the commercial testing is now available so that our citizens can be better served and our discovery can now be available to people around the world.”

Dr. Young is the co-lead for the Genome Atlantic/Genome Canada Atlantic Medical Genetics and Genomics Initiative. As part of this initiative, ARVC is one of 28 inherited diseases affecting Atlantic Canadians for which scientists hope to pinpoint the genetic mutation.

Without intervention, only half of males who carry ARVC survive to age and 40 and 80 per cent are dead by age 50. Often, the first sign of this condition is death. Usually, once a gene is discovered, it takes years of further research before a therapy is available. However, in this case, an immediate life saving intervention is available. A pacemaker type device called a defibrillator can be implanted which restarts the heart if it stops. This device has been very successful in saving lives.

David King, president of the Genesis Group, said, “With this test now being widely available, the number of lives this gene discovery can affect has increased dramatically and this is only the start. With our unique and accessible genetic pool, the outstanding research capacity at Memorial and the emerging strength of our industry partner, Newfound Genomics, we can build a strong genomics industry in the province which will produce products and services here that can alleviate pain and suffering around the world.”

The alliance between Memorial University, Newfound Genomics and PGxHealth was formed during a bio-partnering mission, hosted by Nati, which brought international companies to St. John’s Oct. 28-31, 2008.

Bottom left, Dr. Wayne Gulliver, adjunct professor at Memorial and president of Newfound Genomics; bottom right, John Schultz, senior vice-president of licensing and strategic development, PGxHealth; middle left, Paula Clarke, life sciences officer, Genesis Group Inc.; middle right, Dr. Terry-Lynn Young, Faculty of Medicine and lead inventor on discovery; top, David King, president and CEO, Genesis Group Inc.
Dr. Anne-Marie Beaudet, a fourth-year diagnostic radiology resident, received two awards for presentations based on her project “Spatial Perception Testing amongst Radiology and Non-Radiology Specialties.” In March 2008 she presented the project at the Newfoundland and Labrador Association of Radiologists Annual Spring Meeting where it took second-place honours in the Boston Scientific Resident Award. In May, she was awarded first place in the Resident Award category at the 71st Annual Scientific Meeting of the Canadian Association of Radiologists, held in Ottawa. The research for this project was performed in collaboration with Dr. Rick Bhatia, faculty radiologist.

Dr. Ian Bowmer, former dean of medicine at Memorial and executive director of the Medical Council of Canada, was named as the 2008 Osler Lecturer by the Royal College of Physicians and Surgeons of Canada and the Canadian Society for Internal Medicine (CSIM). He presented the lecture on Oct. 15, 2008, during the CSIM annual scientific meeting.

Dr. William Fitzgerald, surgeon-in-chief of the Grenfell Regional Health Services, and a part-time member of the Discipline of Surgery, began his two-year term as the 40th president of the Royal College of Physicians and Surgeons of Canada in September 2008. “I am greatly honoured to be elected president of the Royal College,” said Dr. Fitzgerald. “I bring the perspective of a rural surgeon whose professional circumstances have meant that I am no stranger to creative problem-solving and resourcefulness. While I do not pretend to have all the answers, I am prepared to ask the tough questions.” Dr. Fitzgerald will see the Royal College working closely with governments and other stakeholders to develop a strategy to address inter-provincial and international mobility and other such issues that will influence specialty human resources in this country. Just as the Royal College moves forward, Dr. Fitzgerald will also pursue promoting its history and heritage as the springboard for learning about health care in Canada – past, present and future.
Dr. Jane Green, a pioneer in the field of genetics, received a Knowledge Translation Award from the Canadian Institutes of Health Research (CIHR). The $50,000 award will allow her to visit all 28 hospitals in Newfoundland and Labrador during 2009 to give presentations on the implications of genetics and hereditary diseases to health care professionals and the public, and to provide in-service teaching to public health nurses. The award will also cover the cost of a part-time research assistant.

Dr. Green started compiling pedigrees on families in Newfoundland and Labrador in which there was a hereditary loss of sight in the 1970s. Since then there has hardly been a study of human genetic disease that she has not been involved with in one capacity or another. Her seminal work on hereditary cancer in the province has spawned several large grants and research endeavours but equally important, it has saved lives, prevented suffering and significantly reduced the provincial health budget. She has put Newfoundland on the map with her international collaborations, but has always stressed the need and desire for human molecular genetics to be carried out at Memorial University. Her work on hereditary colon cancer paved the way for the Colorectal Cancer Study, collaboration between Memorial University and Mt. Sinai Hospital, Toronto, in which she is a key team member.

She is also a co-investigator in the Atlantic Medical Genetics and Genomics Initiative, a partnership between researchers at Memorial and Dalhousie University. This project integrates the potential impacts of genetic discovery on the provision of health care services, including assessing the well-being of patients and families who are affected by genetic conditions.

Kelly Hynes, a third-year medical student, has been elected to the position of Atlantic Regional Representative at the Canadian Federation of Medical Students (CFMS). The CFMS is the national federation of medical student societies, representing approximately 7,000 medical students in Canada.

Dr. Amin A. Muhammad, professor of psychiatry, is author of two recent publications and made three keynote presentations at conferences in Pakistan during December 2008. “Karo-Kari: A form of honor killing in Pakistan”, was published in the Dec. 8, 2008, edition of Transcultural Psychiatry. The article, “Aftermath of child abuse: Need to reduce the burden of morbidity,” was published in the Journal of the Pakistan Medical Association, 2008, Vol. 58, No 12. Dr. Muhammad visited Pakistan during December where his book Weather of Pain was launched Dec. 15. This book deals with true stories about mentally ill people who underwent social adversities – the narration is in the form of short stories glazed with fiction. On Dec. 17 he conducted a seminar on “Prevention of Mental Illness with Focus on Depression” at the Pakistan Medical Association, Karachi. On Dec. 20 he presented a keynote address titled “Mental illness among Psychiatrists” at the National Science Conference held at the Karachi University. On Dec. 21 he presented a talk on “Beyond Child Abuse: Challenges Ahead” at the Child Rights Conference held at College of Physicians and Surgeons of Pakistan.
Heather O’Reilly, a second-year medical student, was named the Canadian Red Cross 2008 Young Humanitarian recipient for Newfoundland and Labrador. Heather has had a keen interest in humanitarian issues since high school. While attending Queen’s University, she became involved with Queen’s Medical Outreach, a group that focuses on local and international health issues. In 2002 she spent a summer teaching public health, AIDS/HIV education, dental hygiene and literacy in Guyana. In 2007 she spent six weeks in a refugee camp in Tanzania where Somalian refugees were living, primarily teaching HIV prevention, maternal health and nutrition. As a respiratory therapist, she volunteered in the health clinic and also worked with other volunteers in improving sanitation and water safety. The volunteers taught English at the request of the local community, and incorporated health education in the English lessons. Four years ago, she established MUNHOPE at Memorial, an organization that aims to raise awareness and funds for global health outreach and provides opportunities for Memorial students to volunteer in developing countries.

Susanne Price, a fourth-year medical student, has received a CFPC Medical Student Scholarship from the College of Family Physicians of Canada. CFPC awarded 17 of these scholarships to Canada’s top medical students who plan careers in family medicine. The scholarship is valued at $10,000 plus travel and expenses to attend the 2008 Family Medicine Forum, held in November in Toronto. Susanne is an executive member of the Family Medicine Interest Group at Memorial and has organized Family Medicine Information Nights for students and family physicians and generated funding for the group through the creation of a FMIG information document. She is also a senior representative on the CFPC’s Section of Medical Students Board where she assisted in the creation of an event tool kit for family medicine interest groups. Susanne views a career in family medicine as both challenging and rewarding, and is dedicated to promoting the benefits of family practice to other medical students.

Dr. Nigel Rusted (FMIG) was presented with the Freedom of the City Award during a ceremony at city hall Sept. 30, 2008. Dr. Rusted started his career as a medical student aboard the S.S. Kyle in 1930 and 1931. After finishing school at Dalhousie, he worked as a general practitioner for 80 communities along the southwest coast before opening a private practice in St. John’s. He also worked as a general surgeon at the General Hospital and has given generously of his time and knowledge to Memorial’s medical school. He is a graduate of Memorial University College, a retired clinical professor of surgery and an honorary graduate of Memorial.

Dr. Graham Worrall, Discipline of Family Medicine, received the Canadian Family Physician Best Original Research Article award for 2008. The award was presented during the Family Medicine Forum of the College of Family Physicians of Canada, held in Toronto Nov. 27-29. This award is given for a scientific article published in Canadian Family Physician resulting from a research project developed, financed and completed by the authors. The article “Diagnosing streptococcal sore throat in adults: Randomized controlled trial of in-office aid” by Dr. Worrall, Dr. James Hutchinson, Dr. Gregory Sherman and James Griffiths was published in Canadian Family Physician 2007; 53:666-71. Dr. Worrall is the director for the Centre for Rural Health at the Dr. William H. Newhook Memorial Clinic in Whitbourne.
Of NOTE

Order of Canada for Dr. John Lewis

John F. Lewis, C.M., M.D., was appointed a Member of the Order of Canada on Oct. 23, 2008 for his contributions to health care and health education at the local and provincial levels and for his role in establishing many essential community-based medical services at home and abroad. There will be an awards ceremony later this year in Ottawa for the presentation of this honour.

Dr. Cheri Bethune, who nominated him for the award, said Dr. Lewis is a noteworthy individual predominantly because of his commitment to people. She noted that two remarkable examples of Dr. Lewis’ capacity to be both visionary and pragmatic are in his work in the Shea Heights community on the outskirts of St. John’s. “This economically deprived community arose as a shanty town on a cliff outside the major port city. Dr. Lewis worked with the local priest, Father Shea and several community activists to bring essential health care services to this community. He started a clinic in the school classroom and then lobbied for further resources. This community emerged from health indices that paralleled the third world to Canadian standards within 10 years of the inception of the clinic. Thirty-five years later his model of interprofessional primary health care is a model of practice that most envy. His compassion and vision in working with the community is fondly remembered by the elders.”

Dr. Lewis also brought his notion of service to his role as a faculty member in the Discipline of Medicine. “Along with the late Dr. John Ross, O.C, he built an award-winning family medicine training program that first and foremost addressed the health care needs of the province of Newfoundland,” said Dr. Bethune. “It was unique in its delivery as the ‘laboratory for learning’ for students was the small communities across the island. This program was visionary in 1970 and many similar training programs have used this as a model. Memorial University retains this reputation as training the most well prepared rural doctors in Canada.”

Dr. Lewis taught and wrote about reflective practice. “He lectured about evidence based medicine long before it became de rigueur and he constantly challenged students, colleagues and himself about how to practice most effectively.”

Dr. Lewis acts locally but also thinks globally in his commitment to the people of Africa, said Dr. Bethune. “He worked as a physician in Tanzania early in his career and several of his children were born there. He returned again to Africa after his retirement from the university to serve again both in Uganda and Kenya.”

Dr. Lewis was honoured by his peers in his nomination for the Murray Stalker Award of the College of Family Physicians of Canada, which is the most prestigious award given by this national body recognizing exemplary commitment to family medicine.

Dr. Bethune said Dr. Lewis recently returned from, what he claims is his last sojourn to Africa; although many of us doubt his retirement. “He will likely continue to provide wonderful locums to rural communities across Newfoundland for the next few years. This allows him to indulge in his other passions that include cross country skiing, fly fishing and story telling.”
1. **The blues.** A state of depressed energy, depressed spirits, melancholy. Contacted from “blue-devils,” e.g., “a fit of the blue devils” as in George Cruikshank’s 1823 print The Blue Devils, fig. 1.

2. **Winter blues.** Mild changes in emotion and mood (e.g., lack of energy, feeling depressed), commonly associated with the winter; the changes may be more than a nuisance although not usually taken to the doctor. Winter blues is a mild form of seasonal affective disorder (SAD) in which major changes in mood and behaviour produce significant problems frequently requiring professional assistance.

3. **The blues** is the African-American tradition that emerged from the setting of poetry to a particular musical form; commonly mournful, early blues addressed matters such as low spirits and life’s troubles. Nowadays, it is seen more as entertainment alone, rather than part of a social/political movement.

We began to muse on the term “blues” after glancing through the annual crop of popular articles on holiday blues, many singled out for the elderly with worries of higher mortality rates during the Christmas season. Why “blues?” How common are they? Does it encourage certain types of advertising during the winter and Christmas season? (We have been bemused by an increase in SPAM e-mail during December from Irma, Mabel, Ida, Sheila, Sexy Girl and others! Certainly such “cheering-up,” if, euphemistically, it can be so-called, is far removed from many early 20th-century postcards that tried to raise the spirits of those suffering from the “blues.” (See fig. 2 for an example.)

The card contrasts markedly from innumerable other “cheer-up” cards that are saucy or vulgar. Like many later “Get Well” cards, albeit always mailed hidden from view in envelopes, they can be described as on the blue side to use a slang meaning of blue, namely smutty or indecent talk.

Popular articles on winter and holiday blues are full of advice on the importance of making connections as well as appearing to be up-to-date by noticing light therapy although it is by no means new. In fact, the open-endedness of the often glib advice raises the question whether it is any more effective than some of the peremptory nineteenth-century advice on treating melancholy, for instance, to “forcibly agitate the system,” or to engage “the interest of powerful and continuous impression on external senses.”

Advice it seems to us must rest on understanding the social/cultural/economic circumstances of an individual. Whether, for instance, holiday blues among the elderly are linked to frustration with changing times, rosy memories of happy, less commercial, holidays in the past, unfulfilled dreams at the end of a year, and friends already departed.

Friends, family and caregivers in understanding such matters, need to be empathetic in ways that awaken the special interests of sufferers from blues. Only exceptionally – to give one example – might this be an interest in blues music, perhaps with CD gifts of new performances. But whatever special interests are pursued, the role of humour, as early postcard manufacturers appreciated, is always an important consideration (cf. fig. 3).
Final touch
By Dr. Paul Patey

“Do you think she’s dying?”
“Probably,” replies the nurse, Ruth.
“Why do you want me to see her?”
“It’s helpful to the family,” replies Ruth, just before we enter the patient’s room in the nursing home.

Two women, probably both in their late 40s, are with the patient. The nurse introduces me to them: Pauline and Joyce, daughters of Mrs. Murphy, our patient. I notice both are standing near the foot of their mother’s bed.

I summarize: “Your mother’s been sick a long time. She’s had big changes in the past three months. How has she changed this week?”

Pauline replies, “She wouldn’t eat, she only sipped. She hardly talked. Now that’s all gone.”

“She just lies there,” adds Joyce. “I don’t even know if she knows we are here.”

“Let’s have a look. You can stay,” I say, as I move to the patient’s right side.

I observe her grey skin, feel her weak pulse, observe her shallow rapid breathing, listen to her rapid heart beat, and see her normal veins, empty belly and thin legs. I observe her shut eyes and open mouth. It’s the end stage of chronic obstructive lung disease.

Mrs. Murphy makes no response to words or noise. When I try to open her lids, she resists slightly. Pupils are equal, and react slightly to light. I press firmly on her eyebrow: she grimaces slightly.

To Ruth, the nurse, I say, “Is there somewhere we four can talk?”

Ruth leads us to a nearby room which I know is commonly used for family interviews and brief gatherings around the time of death. We sit.

To the daughters I say, “Do you think she’s near the end?”
They both nod.
I continue, “You’re right. Anytime – hours, days at most.”

I pause and then continue, “Her lungs can’t keep her going any more. Her heart is giving out. It’s pumping poorly. That’s why she’s turned from blue to grey in the past couple of days. Her brain is giving out. She’s in a coma. Maybe she hears you a bit but she hardly responds at all.”

Both daughters sigh and are silent. I inquire “Who else is there in the family?”

“Dad died 10 years ago. Mom’s lived with me most of the time since then,” responds Joyce. “Our brother is arriving tomorrow morning.”

I ask if there are any further concerns and questions, and deal with the minor matters that arise.

“Now, let’s go back to your mom’s room again,” I say.

Deliberately letting the others enter first, I notice that both daughters have again paused near the foot of their mother’s bed.

I say, “Go closer – go up by the head of the bed, on the right side.”

They do. Then I say, “Touch her. Touch your mom.”

One places a hand on her forearm, which is on top of the sheets. The other daughter touches her mother’s cheek.

I pause awhile, and then I say, “When you were born your mother welcomed you with a touch. Now you can say ‘goodbye’ with a touch.”

Again I pause. There is silence. Then I add, “Perhaps we can feel touch and be comforted by it when all other awareness is fading or gone, and when we can no longer respond. Touch her.”

As the nurse and I depart I notice that Joyce is gently stroking her mother’s right cheek with the middle section of her flexed left middle finger, it’s a common way parents caress sleeping infants.

At the nursing desk Ruth and I review matters that arise.

At the nursing desk Ruth and I review.

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At the nursing desk Ruth and I review.

“Mom was just breathing like she was when you were here in the afternoon, then she started breathing slower, and then she just stopped.”

Joyce pauses a moment and then continues, “I was just stroking her cheek like this when she took her last breath.”

I watch Joyce’s finger still caressing her mother’s cheek as at the moment of her death, when mother received her final loving touch.

Comments

Touch is a powerful means of expressing love, with an immense variety of opportunities and methods. Loving touch conveys a mutually comforting nearness.

Deliberately, proactively, trying to help love grow is good psychotherapy that can be implemented in numerous situations. Thus, I deliberately took initiative to encourage both daughters to come closer to their mother, and to touch her. Loving behaviour often benefits the receiver; loving behaviour always benefits the giver.
Winter reflections
By Dr. Bill Eaton

Resolutions
As the old year passes and a new one staggers to a start, many people reflect on their lives. Some dedicate this time to make pronouncements about the anticipated behavior changes, especially concerning food intake and energy expenditure. The old bug-a-boos of diet and exercise. Nothing like a long winter’s night to contemplate how much better you’ll be after you begin your new lifestyle.

Anxiety decreases once you’ve made the plan. Unfortunately anxiety is often our main motivator to change and once the anxiety is gone so is the motivation. This explains why a gym that accommodates a mere 50 people can sell 500 memberships – one in 10 actually show up.

Memory
Memories are much like ski tracks in fresh snow. The more one skis down a track the deeper it gets and the easier it is to follow. It’s also harder to move out of a rut once you get “set in your ways.” Conversely, the more tracks you make on a certain slope, the more divergent your options when faced with an obstacle.

If you have only one way down you’ll have trouble avoiding ice patches, rocks and yahoos. You see others whipping round life’s detritus while you fall or fume. Bitterness sets in, making for a long winter.

Learning to ski is a fascinating prospect. Your focus narrows from all the vagaries of your life to the state of your ski tips. Conversely, if the thorny issues in your life, like taxes, clinic, or administration, shift your focus, you fall down and hurt yourself.

Research
Reading humour research can be quite tedious. And dull. Why should this be? Can’t humor research be funny? The short answer is a loud NO. I have concluded four reasons for such dullness. Read on.

1. To compete for funding grants, the researchers need to write in the jargon of the agency offering the funds. Any funny ways of expression must be put aside because people with money distrust non-serious people. Bankers are serious people who wear serious shoes.

2. To collect the data, the researchers must supplicate themselves at the feet of ethics committees and professional governing bodies. Humorous approaches are rejected and the research stops before it begins. Ethics people wear well-worn, sensible shoes.

3. Scientific journals demand a set of writing rules that induces sober reflection (substitute dullness). As a result, the originally funny person must refrain from being witty if the research is to be published and promotions assured. Editors and promotions committees need steel-toed boots.

4. All research is dull. And shoeless.

Happiness
Research into this subject has uncovered the “U” shaped curve. The happiest people are those at the ends of life’s spectrum. The very young are very happy, the middle aged are least happy while the very old are very happy again.

With middle age comes the departure of children and the illness of parents. The changing of the old guard and the rising of the new leads those in their middle years to lose their purpose – reproduction, instruction and projection of the young into the world. When your children are small you know exactly what you will do of a Saturday morning.

When the children grow up, but haven’t moved out, you are faced with adults who still have child-like needs. They’ve lost the wonder of childhood but still want a cooked supper. When they move out, your happiness curve rises again, only to blip downwards when they move back home. You don’t have your own car anymore and you have to eat at six even though the “children” are usually late.

With old age, happiness rises again. Things in common between the old and the young: life’s rhythms are internal and personal (not nine to five), other people run the world, and (my favorite) both often need diapers. The more diapers the more happiness. I’ll get by with a little help from depends.
Today I am sandwiching this MUNMED blog page between two slices of whole wheat internet Christmas shopping.

Reunion 2008 in early August began with a mixer on Friday night, then a massive tidal wave hit downtown for the George Street festival. Saturday morning greeted many bright-eyed and keen alumni, who were educated and entertained by fellow colleagues Drs. Sam Lee, Art Rideout, Tiffany Keenan and Tom Noseworthy. Tiffany received a resounding standing ovation by all alumni that morning for her inspirational work in Haiti.

Class parties on Saturday night extended well into Sunday a.m. Dean Rourke tried to visit all of the class parties on Saturday night; however, extended conversations with alumni prevented him from visiting all of the parties. Great to have you around, Jim!

Sunday morning’s golf tournament at Clovelly Golf Course did have a lower turnout than expected. However, the golf players, including two med school teams, played with enthusiasm and warmth. Warmth was necessary, because it was freezing. Dr. Andrea Garland advised me to pass out hot chocolate instead of bottled water.

Plans are well underway for the 2009 reunion, so if you are one of those lucky grads (Classes of 1974, ’79, ’84, ’89, ’94, and ’99), book your flights. The Dean Rusted Golf Tournament has been moved to Saturday afternoon. Other outings will be planned for the non-golfers, so watch for information in the mail.

The blog still has zero entries. Visit www.med.mun.ca/Alumni/Medical-Graduates-Society.aspx and write something! The 10th entry will receive a Christmas turkey, even if it’s May.

The Medical Graduates Society (MGS) board would like to welcome Dr. Sandy MacDonald and Dr. @&@% (who wishes to remain completely anonymous).

A meeting was held Dec. 1, 2008, and the Ingram award reports from the successful applicants were requested. These reports will be presented in the next MUNMED issue.

A special thanks to Dr. Jim Rourke for his interest and support of our Alumni Association.