<table>
<thead>
<tr>
<th>INSIDE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>REFLECTIONS FROM THE DEAN</td>
<td>4</td>
</tr>
<tr>
<td>THE NEED FOR EXPANSION</td>
<td>6</td>
</tr>
<tr>
<td>PARKING: NOT A SIDE ISSUE</td>
<td>8</td>
</tr>
<tr>
<td>VITAL STATISTICS</td>
<td>9</td>
</tr>
<tr>
<td>NEW CENTRE OFFERS ADVANCED SIMULATION</td>
<td>10</td>
</tr>
<tr>
<td>ADVANCED GENETICS RESEARCH</td>
<td>12</td>
</tr>
<tr>
<td>TRANSLATING DATA INTO INTERVENTIONS</td>
<td>14</td>
</tr>
<tr>
<td>SUDDEN CARDIAC DEATH GENE</td>
<td>15</td>
</tr>
<tr>
<td>GENETICIST MAPS DISEASES</td>
<td>16</td>
</tr>
<tr>
<td>SOUND INVESTMENT</td>
<td>17</td>
</tr>
<tr>
<td>ETHICAL ISSUES IN GENETICS</td>
<td>17</td>
</tr>
<tr>
<td>NEW CURRICULUM EMBRACES INNOVATION AND COLLABORATION</td>
<td>18</td>
</tr>
<tr>
<td>TECHNOLOGY AN INTEGRAL PART OF CURRICULUM</td>
<td>20</td>
</tr>
<tr>
<td>RESEARCH INTEGRATED INTO CURRICULUM</td>
<td>20</td>
</tr>
<tr>
<td>INCREASING RURAL EXPERIENCES FOR MEDICAL STUDENTS</td>
<td>21</td>
</tr>
<tr>
<td>ADMISSIONS PROCESS UNIQUE TO MEMORIAL</td>
<td>21</td>
</tr>
<tr>
<td>GLOBAL LEADER IN SOCIAL ACCOUNTABILITY</td>
<td>22</td>
</tr>
<tr>
<td>GATEWAY PROJECT ENGAGES MEDICAL STUDENTS AND REFUGEES</td>
<td>23</td>
</tr>
<tr>
<td>MAKING A POSITIVE DIFFERENCE IN THE WORLD</td>
<td>24</td>
</tr>
<tr>
<td>PREPARING THE HEALERS OF TOMORROW</td>
<td>25</td>
</tr>
<tr>
<td>SOLID GROWTH IN RESEARCH AND GRAD STUDIES</td>
<td>26</td>
</tr>
<tr>
<td>FELLOWS OF THE CANADIAN ACADEMY OF HEALTH SCIENCES</td>
<td>28</td>
</tr>
<tr>
<td>RESEARCH AWARDS</td>
<td>30</td>
</tr>
<tr>
<td>SERVICE AND TEACHING AWARDS</td>
<td>34</td>
</tr>
<tr>
<td>BEST IN CANADA FOR PRODUCING RURAL DOCTORS</td>
<td>35</td>
</tr>
<tr>
<td>ESSENTIAL TOOL IMPROVES CHILD CARE</td>
<td>35</td>
</tr>
<tr>
<td>EXPANSION AND INNOVATION IN FAMILY MEDICINE</td>
<td>36</td>
</tr>
<tr>
<td>DEVELOPMENTS IN PRIMARY HEALTH CARE RESEARCH</td>
<td>38</td>
</tr>
<tr>
<td>AWARD WINNING TEACHING</td>
<td>40</td>
</tr>
<tr>
<td>EXCEPTIONAL ALUMNI</td>
<td>42</td>
</tr>
<tr>
<td>PASSINGS: THE END OF AN ERA</td>
<td>44</td>
</tr>
<tr>
<td>LEADERSHIP</td>
<td>48</td>
</tr>
<tr>
<td>MONTE CARLO GALA</td>
<td>50</td>
</tr>
<tr>
<td>CRAFTING A LEGACY</td>
<td>51</td>
</tr>
</tbody>
</table>
I WAS DELIGHTED in 2004 to be appointed dean of medicine at Memorial University. My wife, Dr. Leslie Rourke, and I saw our move as a wonderful opportunity for new and challenging experiences. My time as a rural family doctor and my involvement in medical leadership at the University of Western Ontario and around the world provided a good fit for the role of dean at Memorial.

When I arrived in St. John’s I had some trepidation as I had to cross picket lines due to the ongoing strike of the Newfoundland and Labrador Association of Public and Private Employees and the Canadian Union of Public Employees. Also, the medical school was facing an upcoming MD accreditation. That would be the first of many challenges as dean that were surpassed by the many joys of working with so many great people in St. John’s and around the province. In order to become familiar with the people and health care system in the province I visited teaching sites and did some clinics around Newfoundland and Labrador to get a feeling for what doctors, nurses and our students and residents were facing.

It was quickly evident to me that the province relied heavily on the importation of doctors. So it was no surprise when the provincial government asked us to develop a plan to train more doctors from Newfoundland and Labrador.

The whole story of the expansion that took place over the next decade is described in the next few pages of Reflections (pages 6-9). Once the financing for a new building was in place, we went into full expansion mode and in 2013 expanded the number of medical students accepted each year from the historic base of 60 to 80. The 20 extra seats are all reserved for students from Newfoundland and Labrador.

We also developed a new curriculum designed to meet the needs of the province. Instead of being an off-the-rack curriculum, we focussed on building a medical education that would give our medical students a thorough knowledge of the needs of the province.

A vital part of the new curriculum was expanding our rural network so medical students would have maximum exposure to rural medicine. The curriculum weaves in local knowledge and builds into our residency training program, which has now expanded to accommodate a class size of 80. The family medicine residency program was re-developed so residents can now choose to spend most of their time in selected geographical areas (see story page 36-37).

I am particularly proud that Memorial’s medical school is recognized as a leader in the world in public engagement, responding to the needs of our communities (see stories pages 22-25). This fits in with Memorial being a public university with special obligations to people of Newfoundland and Labrador. I am also proud that we have an Aboriginal Health Initiative that allows a minimum of three Aboriginal students a year to begin their training as doctors.

When I look back over the last 12 years, there are some things that really stand out. We have completed a vital expansion and the new building accommodates the increased undergraduate class size and a new state-of-the-art genetics centre. Along with the larger class, we have developed a new and unique admissions process to match the needs of this increase (see story page 21). And we have important partnerships with New Brunswick, Prince Edward Island and Nunavut that add diversity to our medical school class and residency opportunities.

Although I am proud of the accomplishments over the last 12 years, I know there will continue to be challenges. We have proven that what can start with a problem can become an opportunity and through team work can become a solution. I have been blessed to work with so many good people who are dedicated to the Faculty of Medicine and serving the people of Newfoundland and Labrador.

There have been so many joyous moments, from welcoming each new medical class at our home and then having them back four years later after graduation. I have shared the joy of presenting awards to medical students, graduate students and faculty. And what excitement when grant applications are successful and lead to research discoveries! Above all, working in enthusiastic teams has been a pleasure and has led to successful outcomes such as the development of our new curriculum.

“My wife Leslie and I have enjoyed living in Newfoundland and Labrador and partaking in the culture. Wherever the future takes us, our hearts will be with this province and the continuing success of Memorial’s Faculty of Medicine.”
IN 2004, WHEN DR. JAMES ROURKE was appointed dean of medicine at Memorial, he found that there was an acute need to expand both medical school education and research facilities in the Faculty of Medicine.

“We had become terribly short of space and the facilities in the Health Sciences Centre had degraded,” he recalls. “With little money to fix up the building there were 50 rooms with plastic in the ceiling funneling water from a leaky roof into garbage cans.”

In addition, although the medical school had been producing a steady supply of graduates, many of whom had set up practice in Newfoundland and Labrador, the province was continuing to rely on recruiting large numbers of provisionally licensed international medical graduates (IMGs) to meet its physician resource needs. The rapid turnover of these IMGs was a problem.

During the summer of 2006 the provincial health minister at the time, Hon. Ross Wiseman, met with Dr. Rourke and wanted to know if it was possible to increase the number of medical graduates from Memorial and how quickly that could be done.

“We had been graduating 60 MDs per year and had been for years,” said Dr. Rourke. “We didn’t have the classroom space or number of faculty to teach more students and our accreditation showed we were below the number of faculty expected for the size of the class.”

Looking forward to a time when there would be an increase in the provincial budget from oil revenue, plans proceeded to expand the physical facility along with faculty and staff to support an increase to 80 medical students accepted per year. The entire increase was focused on taking more medical students from Newfoundland and Labrador and training them in Newfoundland and Labrador to be recruited to work in the province. It became a platform of the provincial Progressive Conservative Party and once they were re-elected in 2007 it was full speed ahead on the medical education expansion.

Fortuitously, at about the same time an opportunity opened up to increase the Faculty of Medicine’s research facilities. “We had reached absolute capacity, there wasn’t another place to put another graduate student or expand laboratory space,” said Dr. Rourke. “But there was no provincial money to spend on the research side. Then the Canadian Foundation for Innovations (CFI) came out with a grant competition to make $1 billion available across Canada for research hospitals and partners to expand research structures.”
Led by Dr. Patrick Parfrey, the process was started to put in an application to expand genetics facilities. Newfoundland’s unique gene pool and the presence of excellent researchers at Memorial University and Eastern Health convinced CFI to select this province for one of only eight projects funded across Canada. This announcement was made in August 2008, and with the $11.12 million secured from CFI the province contributed $17.8 million to the $29 million project.

Just as things were looking positive, with construction ready to begin, a global financial crisis happened. “It literally felt like we were in the Super Bowl with the touchdown pass in our hands in the end zone to win the game – which was to expand research space and increase class size – when along comes this big linebacker from the side and knocks you down and the ball flies up in the air,” commented the dean.

Despite the challenge of this crisis, Dr. Rourke said plans were saved when the provincial government came out with a plan for stimulus funding package. “The whole expansion team worked around the clock to put together a successful proposal for financing under this package. We were very grateful for the provincial government’s foresight in proceeding with this project at a time of worldwide constraint.”

Once the funding for both the medical school expansion and the genetics research facilities was in place, development went full speed ahead. With Charlie Henley as the leading design architect and Wes Drodge as project consultant, a plan was put into place to meet all the objectives. “Although the original idea was to have two separate buildings, once the CFI funding was in place it made sense to stack the buildings,” said Dr. Rourke. “This saved several million dollars and left the rest of Parking Lot 9 for rebuilding Animal Care Services and potential future expansion of the School of Nursing and the School of Pharmacy.”

Dr. Rourke explained that construction of the new building, done at a time of a global financial crisis, actually meant great value for the money and the project came in on time and on budget.

The result was a very well-designed building adjacent to the Health Sciences Centre. The new building provides approximately 150,000 square feet of additional space and accommodates the Medical Education Centre on the first two floors and the genetics facilities, named the Craig L. Dobbin Genetics Research Centre, on the top levels, with Level 6 shelled in for future research expansion.

One design feature of the new building is the incorporation of light tunnels – unobstructed hallways with windows at each end – so everyone working in the building, even those without windows, can just step out into the hallway to see what’s happening outside. “We also designed the offices so people working on the same projects could be clustered together, encouraging walking and talking rather than emails,” said Dr. Rourke.

The dean said the new building features a beautiful open area in the large, three-storey entrance foyer, with warm bright light. “It exceeded our expectations,” said Dr. Rourke. “This open space has allowed us to use our facilities on weekends, for conferences and other events that would be very expensive to hold off-campus.”

Inside the Medical Education Centre is a state-of-the-art Clinical Learning and Simulation Centre. “As we did in researching the design of the overall building, again we benefitted from a team that travelled to look at other simulation centres to find out what works best – we didn’t want to repeat mistakes that we could avoid,” said Dr. Rourke. “We took the best of the best and right now it’s the best designed simulation centre we know of. It’s used morning to night, often seven days a week.”

The dean noted that the building is also designed for energy efficiency – for example, the flush water for the toilets comes from rain water. The design features two large lecture theatres that are very flexible for grouping students. On the fifth floor, laboratory space is designed as one common room with shared space so if an investigator gets more research they can expand their space.

“The overall project is a commitment to, and an investment in, the provision of enhanced health care to the people of Newfoundland and Labrador,” said Dr. Rourke.

“This open space has allowed us to use our facilities on weekends, for conferences and other events that would be very expensive to hold off-campus.”
With the Faculty of Medicine’s new expansion up taking up half of Parking Lot 9, parking places were lost coupled with the need for new parking for the influx of new people, including those from Eastern Health working in the genetics centre.

“We had to solve some of the parking problems and we did that in two ways,” said Dr. Rourke. “The obvious way is that a new parking garage was constructed off Arctic Avenue and this opened in January 2012.”

The new parking garage is a four-story structure with about 870 parking spaces, including spaces for people with disabilities and motorcycle and bicycle parking. The parking garage is used by Memorial University, the Faculty of Medicine and Eastern Health.

However this still left a need for more parking for Eastern Health. So the land west of the Health Sciences Centre towards the pond, which was owned by the university, was given to Eastern Health to provide paved ground parking for Eastern Health patients and staff and the new Ronald MacDonald House.

“This increased parking space for Eastern Health by more than 500 spaces as a temporary approach which is still ongoing,” said Dr. Rourke. “This has often gone unrecognized but it was important in putting the expansion in place to make the deal work for all partners, including patients and the visitors that come to the Health Sciences Centre every day.”

THE EXPANSION of the medical education program of the Faculty of Medicine and the creation of the Craig L. Dobbin Genetics Research Centre are accommodated in the new six-storey building adjacent to the Health Sciences Centre.

The Medical Education Centre is on levels one and two and the Craig L. Dobbin Genetics Research Centre is on levels three, four and five. The sixth floor is shelled in for future research expansion.

Key features of the new building include:

- A new state-of-the-art Clinical Learning and Simulation Centre
- Two large lecture theatres
- Standardized patient exam rooms
- Educational support units
- Wet and dry laboratory research space
CENTRE OFFERS ADVANCED SIMULATION

Chelsea Ash (Class of 2017) with a newborn high-fidelity mannequin.
WHEN THE MEDICAL EDUCATION CENTRE opened in 2014 it allowed a vital expansion to the size of the entering medical school class from 60 to 80, with all of the additional 20 seats reserved for students from Newfoundland and Labrador. Two large and updated lecture theatres accommodate the larger class, with moveable seating that can be put in many different formats to maximize modern learning techniques. There are also many small group learning rooms and educational support units located in the building.

At the heart of the Medical Education Centre is the Clinical Learning and Simulation Centre (CLSC). The centre amalgamates three support units that include the Standardized Patient Unit, the High Fidelity Simulation Unit and the Surgical Skills Unit. Through simulation in many forms, medical students, residents, practicing physicians, nurses and other health care providers develop preparedness and insight that can only come from practising real-life scenarios in a controlled environment.

From labour and delivery to emergency medicine to anaesthesia and surgery, the simulation centre provides hands-on training for a myriad of complex procedures – without risk to the patients. The CSLC includes a family of 12 high-fidelity mannequins and a large number of low-fidelity task trainers for a variety of skill-based activities with pediatric, female and male traumas.

“The new generation of Human Patient Simulators are incredible mannequins, they are robots in fact,” said Dr. James Rourke, dean of medicine. “They are life-sized and capable of accurately mirroring human responses to such procedures as CPR, intravenous medication, intubation, ventilation and catheterization machines. The eyes blink and pupils dilate and an anatomical correct airway inhales air and exhales carbon dioxide. A mannequin can be managed just like it is a person in a ward or in an ICU or an emergency department.”

Dr. Rourke said experience in the simulation lab will result in improved performance, quicker response time, increased confidence, competence and comfort for health care providers from all over this province, as well as medical students and residents.

The CLSC also includes standardized patient exam rooms, similar to doctors’ offices, where medical students and residents can hone their listening and communication skills, essential in the care of patients. Twenty clinical skills teaching clinics are available with an inner hallway used for viewing with one-way glass. All areas of the centre are organized by a software solution with digital video and audio capture as well as archiving and retrieval capabilities.

As well as high-tech mannequins, the CLSC includes the Standardized Patients (SP) Program. More than 300 standardized patients participate in the SP program. They come from varying backgrounds, and range in age from infancy to 85 years old. SPs are healthy laypeople carefully trained to portray an actual patient by presenting the history, body language, physical findings and the emotional and personality characteristics of the patient they are representing. This gives health care learners valuable practice in the “art and science” of interviewing, therapeutic communication and/or physical examination skills.

A video on the CLSC is available at https://youtu.be/TUSQ-t3JMZU

Learn better. Remember longer. Be safer.
Cindy Penney is one of the many graduate students in human genetics benefiting from the new open research space in the Craig L. Dobbin Genetics Research Centre.
GENETICS RESEARCH CENTRE

FROM THE EARLY DAYS of meticulously compiling family trees to identify clusters of diseases in the Newfoundland population, genetics research at Memorial has grown exponentially. Today all aspects of genetics research from bench to bedside are housed in the new Craig L. Dobbin Genetics Research Centre.

A key figure in leading this growth and securing funding for the genetics centre is Dr. Patrick Parfrey, clinical epidemiologist and nephrologist, and John Lewis Paton Distinguished University Professor at Memorial. He was a co-principal investigator in the 2006 Atlantic Medical Genetics and Genomics Initiative (AMGGI), a unique approach to systematically identify genes and genetic mutations underlying familial, monogenic disorders arising in populations and communities throughout the Atlantic provinces. He also headed the Colorectal Cancer Interdisciplinary Health Research Team, a multidisciplinary multi-site study into colorectal cancer in Newfoundland and Labrador, and Ontario.

Out of these initiatives grew the Interdisciplinary Research Team in Human Genetics which developed a system of research into both inherited and complex genetic diseases in Newfoundland and Labrador. Cutting-edge research is uncovering the genetics of diseases like colorectal cancer, sudden cardiac death, deafness, blindness, pulmonary fibrosis, epilepsy and Tourette’s syndrome.

With numerous genetics projects going full steam ahead, the problem became one of space. “At one point I had research teams in three different spaces,” recalls Dr. Parfrey. “We saw an opportunity for developing a holistic approach to genetics research and wrote a grant to the Canadian Foundation for Innovation (CFI) for new space.”

Newfoundland’s unique gene pool and the presence of excellent researchers at Memorial University and Eastern Health convinced the CFI to select this province for one of only eight projects to be funded under the Research Hospital Found. With $11.2 million from CFI to help construct a new building, the Government of Newfoundland and Labrador also invested $17.9 million.

During the process, funding was received for the Medical Education Centre and by combining the two projects, a six-storey building was constructed to accommodate both. “Getting the funding for the genetics research centre was only the start,” recalls Dr. Parfrey. “It took us five years to develop the 80,000 square feet that now houses all genetics and clinical epidemiology activities. It’s allowed us to take a broader approach to personalized medicine beyond translation genomics, in the form of the Translational and Personalized Medicine Initiative (TPMI).”

The Craig L. Dobbin Genetics Research Centre is located on levels three, four and five of the new building. Levels three and four have small research labs that are dedicated for specific purposes and groups. The groups that have dedicated space on these floors are: Genetic Basis of Monogenetic Disease, Genetic Epidemiology of Complex Diseases, GE3LS (Genomics, Ethics, Environment, Economic, Legal and Social Issues), Community Genetics, Biobank, accredited Translational Genomics Centre, Provincial Medical Genetics, Clinical Epidemiology and Centre for Health Informatics and Analytics Research Laboratories. On level five, an extensive open concept lab hosts interdisciplinary research.

Dr. Parfrey emphasized that the key to the success of projects at the genetics centre is dependent on high quality human resources. “We are lucky to have researchers from the Faculty of Medicine like Brendan Barrett, Proton Rahman, Terry-Lynn Young, Holly Etchegary, and JM Gamble from the School of Pharmacy, who are the engines producing progress in the Quality of Care and Translational Genomics Research programs. They are supported by quality expertise in the management of the hardware system and data and analytics through people like Dr. Randy Giffen from IBM. And then the glue that keeps everything together is our two main managers, Elizabeth Dicks and Catherine Street.”

The genetics centre is named in honour of the late Craig L. Dobbin, a successful Newfoundland businessman and philanthropist. The naming is in recognition of a landmark gift from Elaine Dobbin that will support undergraduate student bursaries, graduate student scholarships, two post-doctoral fellowships and a research fund in the Faculty of Medicine.
IT IS OFTEN A STRUGGLE to get the right intervention to the right patient at the right time, whether the intervention be a laboratory or imaging test, a drug or surgery, or hospitalization in acute or long-term care.

In November 2014 Memorial University, in partnership with IBM and government funding agencies, announced the creation of a large, private/public sector initiative known as the Translational and Personalized Medicine Initiative (TPMI), which aims to identify priorities relative to health care.

The combined $50 million investment in TPMI consists of $30 million from IBM, including $10 million in equipment and staffing and a further $20 million in-kind investment for big data and analytics software. Nearly $13 million for the TPMI comes from the Government of Canada through the Canadian Institutes of Health Research SUPPORT Units program ($10 million) and the Atlantic Canada Opportunities Agency ($3 million). The Government of Newfoundland and Labrador is investing $8 million.

TPMI is establishing programs that will evaluate health care utilization and provide report cards, identify and introduce interventions to optimize utilization, and evaluate the impact of the interventions.

There are two research programs initiated under TPMI – Quality of Care and Translational Genomics.

Initial work for projects in all capacities hit the ground running in January 2015. “Since then we have made tremendous progress and that should only continue to grow both programs,” said Dr. Parfrey.

A series of initial projects for study were identified through a series of public engagement events, as well as meetings with key stakeholders in both funding agencies and health authorities. These include laboratory utilization, drug utilization, long-term care planning, remote monitoring in high-risk patients, coronary, carotid and peripheral revascularization, bariatric surgery, screening in familial colorectal cancer, familial cardiomyopathy and inflammatory back pain.

“We have been assembling teams of researchers to examine projects associated with these priorities,” said Dr. Parfrey. “This has also allowed us to currently fund 12 graduate students at the masters, PhD and post-doctoral level.”

With the assistance of IBM, the largest and fastest computing system at Memorial is now housed in the Faculty of Medicine. This computing system is now in use by researchers across campus. Dr. Randy Giffen is the on-site IBM architect and is located within the Centre for Health Informatics and Analytics (CHIA). He has been instrumental in the design and flow of several current research projects.

Dr. Elizabeth Dicks, director of CHIA said the information from testing and screening is highly protected. “With the help of IBM we are now above industry standards for privacy.”

Dr. Parfrey said IBM’s contribution to this initiative has many layers beyond the infrastructure of the computer software and hardware. “IBM representatives have an active role in contributing to ongoing projects by becoming members of scientific advisory boards and the steering committee.”

Dr. Parfrey said that overall this collaboration is not only unique but significant in that multiple partners are involved in steering and scientific advisory committees. “Through TPMI, IBM, Memorial University and government-funded partners, we are broadening opportunities for translational research. This is a tremendous investment in the health of the people of our province and Canada.”

In October 2015 findings were shared at the first research day for TPMI. “This involved principal investigators as well as students who presented their research at various stages,” said Dr. Parfrey. “Over 100 people attended, including members of the general public interested in health-related research, government representatives and researchers from across disciplines within the university. We were happy to have representatives from different areas within IBM in attendance as well.”
THE DISCOVERY of the sudden cardiac death (ARVC) gene in the laboratory of molecular geneticist Dr. Terry-Lynn Young, and the translation of this discovery to affected families by Drs. Kathy Hodgkinson and Sean Connors is an outstanding example of genetics research success.

PhD students Nancy Merner and Kathy Hodgkinson were the first authors on the scientific paper detailing the discovery of the gene responsible for ARVC in Newfoundland families, published Feb. 28, 2008, in the American Journal of Human Genetics.

ARVC (arrhythmogenic right ventricular cardiomyopathy) is a deadly genetic heart condition highly prevalent in Newfoundland and Labrador. Men in affected families often die at a young age with only half of male carriers surviving to 41 years of age.

Thanks to this gene discovery, a simple blood test can now identify those who carry the gene. Dr. Sean Connors, a cardiologist who has pioneered work in implanting internal cardiac defibrillators (ICD) in adult carriers described the ARVC gene mutation discovery as “absolutely pivotal” because it offers certain identification of affected individuals. The tiny ICD restarts the heart if it stops – while not a cure, this device has been very successful in saving lives.

Dr. Parfrey said he is so proud that the work on identifying the ARVC gene was all done in Newfoundland through the hard work of multidisciplinary teams, which he describes as a model for future genetic work.

“The sudden cardiac death project is a successful example of research in which genetic counselors, molecular geneticists, clinical epidemiologists, cardiologists, philosophers and health policy experts have functioned as a team and coalesced around trying to solve a major clinical problem in our province,” said Dr. Parfrey.

A video was recently produced by Genome Canada on the sudden cardiac death gene discovery, visit https://vimeo.com/156017728.
DR. JANE GREEN, a professor of genetics in the Faculty of Medicine, has been at the forefront of genetic research of hereditary cancers and hereditary eye diseases for 35 years. Her studies have led to the discovery of novel genes in Newfoundland and Labrador families and a new understanding of pathways to development of cancer and blindness.

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.

Over her career Dr. Green has talked with thousands of family members, hundreds of affected individuals and dozens of doctors, nurses and health care providers. Her research has made use of the unique features of the Newfoundland population – large family size, genetic isolates resulting in clusters of genetic disease, and well-documented migration patterns to, and within, the province. This research has enabled her to document the spectrum and variability of clinical disease within and between families; to collaborate on mapping relevant disease genes, particularly the first Hereditary Non-Polyposis Colorectal Cancer (Lynch Syndrome) gene; to correlate clinical phenotype and specific mutations; and to apply this data to improved management of the genetic disorder, whether hereditary eye disease or hereditary cancer.

Dr. Green 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. She is most proud of the fact she’s been able to help people with genetic illness in the province. “With the help of family members and physicians from around the province, we have been able to gather information that has led to identification of genes and better treatment for the people affected.”
SOUND INVESTMENT

A NEW GENOMICS-BASED research and development centre for hearing sciences opened in April 2016 in Grand Falls-Windsor. A team of researchers, led by Dr. Terry-Lynn Young, professor of genetics, will study families from Newfoundland and Labrador with genetic forms of hearing loss.

The goal is to try and model hearing defects and develop better algorithms for hearing aids and other devices. If the team is successful, the research could improve the lives of people in this province and around the world.

“We hope that what we learn will help us improve hearing aids and services to people and their families with hearing loss,” said Dr. Young, principal investigator for the project. Scientists, audiologists and computer engineers from Memorial, the University of Western Ontario and McMaster University are collaborating on the innovative research study.

“The question we want to ask is, what does having a specific genetic mutation change about a person’s perceptions of sound in their environment and especially in their perception of speech in noisy circumstances,” said Dr. Young.

By using family genetics to identify and study the causes of auditory hearing loss, the team will create computer models of the damage to the auditory system and how it affects acoustic signals. This information will enable industry to tailor hearing aid technologies to compensate for hearing loss caused by specific auditory damage.

“Genomics can only improve our lives when we figure out how best to make use of the new insights we gain from looking at genetic differences between us all,” said Dr. Young, who has studied hearing loss since the 1990s. “We hope that what we learn will help us improve hearing aids and services to people and their families with hearing loss.”

More than $1 million is being invested in infrastructure for the new centre by Memorial, the Atlantic Canada Opportunities Agency (ACOA) and the provincial government. The centre was established through an ongoing collaboration with the EXCITE Corporation, the not-for-profit business development unit of the Town of Grand Falls-Windsor. The corporation and town have provided a dedicated clinic research space.

ETHICAL ISSUES IN GENETICS

NEW GENOMICS TECHNOLOGY has introduced many ethical, legal, environmental and social concerns. At Memorial, Dr. Daryl Pullman, professor of medical ethics in the Division of Community Health and Humanities, is deeply involved in identifying and addressing such concerns and providing ethics training for genomics researchers.

Dr. Pullman, along with Dr. Fern Brunger, associate professor of health care ethics, became part of the genetics initiative at Memorial in 2006 through the Atlantic Medical Genetics & Genomics Initiative (AMGGI), a $9.6 Genome Canada project to ascertain, collect and molecularly characterize 28 new monogenic disorders in Atlantic Canada. An integral component of the AMGGI proposal was the innovative study by the GE3LS (Genomics, Ethics, Environment, Economic, Legal and Social Issues) team of the potential impacts of genetic discovery on the provision of health care services, including assessing the wellbeing of patients and families who are affected by genetic conditions and who are the most likely consumers of new genetic technologies.

Dr. Pullman said work with the sudden cardiac death gene under AMGGI showed that the shared nature of genetic information results in numerous complex issues. For example, an individual’s right to privacy about his or her genetic information can sometimes conflict with the extended family’s right to know how that information might affect them. “A diagnosis or a finding of inherited predisposition in a family member has implications for other family members. Health professionals have an ethical responsibility to prevent harm or avoid seriously jeopardizing the health of others – this is known as the duty of care. Similarly, individuals undergoing genetic testing have a responsibility to consider not only what it means for their own health, but also what the information may mean for their relatives, and their responsibilities towards those relatives.”

Although the AMGGI project has now concluded, GE3LS research has become increasingly important with a growing emphasis on translational research that moves genomics from the bench to the clinic. In addition to Drs. Pullman and Brunger, the GE3LS team at Memorial now includes Dr. Holly Etchegary, assistant professor of medicine (clinical epidemiology) and Dr. Peter Wang, professor of epidemiology, along with the expertise of the Health Research Unit.

The GE3LS team at Memorial is collaborating with national and international researchers working on a variety of projects related to such issues as genetic education, genetic discrimination, genetic privacy, biobanking and others.
NEW CURRICULUM EMBRACES INNOVATION AND COLLABORATION

Dr. Laura Gillespie, right, is the research mentor for two Phase 2 medical students Scott Besse, standing, and Cody O’Brien.
A PIONEERING UNDERGRADUATE medical curriculum was introduced in September 2013 starting with the Class of 2017. The impetus for the new curriculum was rooted in the Faculty of Medicine’s 2008 Strategic Plan. It was brought to fruition through remarkable teamwork and dedication, led by the Medical Education Leadership team.

The new spiral curriculum is divided into four phases and integrates a story-based context for learning. Topics presenting subjects and themes are revisited over time, with each successive experience building on an earlier one. Special Project half days are included throughout the four phases.

“The spiral curriculum reinforces learning through continued repetition and broadening of the subject,” said Dr. James Rourke, dean of medicine. “Through this approach students build their knowledge and understanding in a structured fashion.”

Dr. Don McKay, associate dean for undergraduate medical education, explained that the new curriculum involved restructuring the Undergraduate Medical Studies Policy Committee into three new sub-committees for student assessment, program evaluation, and informatics and technology. There are four management teams, one for each phase of the curriculum, responsible for the day-to-day operations of the curriculum.

The objectives and competencies of the new curriculum are based on the CanMEDS competencies, the CanMEDS Family Medicine competencies, the Medical Council of Canada objectives, national curriculum objectives and the existing curriculum objectives.

The new curriculum was developed through the hard work of many faculty and staff. Dr. Victor Maddalena, associate professor in health policy, served as the initial lead for Phase 1. As a member of the Stories Working Group, he helped develop stories centred in the fictitious communities of St. James and its neighbouring communities of Lynx River, Jim’s Arm and Coastal Point. Through the use of stories about fictional families in these communities, students repeatedly encounter subjects in a learning spiral starting with health and wellness followed by acute, then chronic conditions. Small group sessions as well as self-directed and independent (including on-line modules) learning opportunities are integral to the new curriculum.

“With respect to our curriculum I’m most proud of the increased research focus and increased amount of rural exposure,” said Dr. McKay. “And we’ve inserted leadership as a competency in line with the new CanMEDS role that replaces manager with leader. We are the first medical school in Canada where every medical student who graduates will now have a certificate in leadership.”

Dr. Maddalena developed the eight modules of the Physician Leadership Certificate for the new curriculum. These modules were developed with the support of Professional Development and Conferencing Services (PDCS), which had previously developed the Physician Management Leadership Program (PMLP) in co-operation with the Faculty of Business Administration’s Gardiner Centre. This program received an innovation award in 2014 from the Royal College of Physicians and Surgeons of Canada.

Memorial is the first medical school in Canada to adopt Core Entrustable Professional Activities (EPAs) for entering residency, as developed by the Association of American Medical College.

“EPAs are exciting because they reflect what doctors do,” said Dr. McKay. “For example, the first EPA is taking a history and performing a physical assessment. Students are assessed for learning in their performance of all 13 EPAs. In their assessment of students we are asking preceptors to be coaches, not judges.”

Dr. McKay said the new curriculum is based on objectives and overarching program goals that were approved by Faculty Council. “Collegiality and collaboration are keys to our success to ensure that we are all working together.”

Three on-line resources are available to support medical students and faculty in navigating the new curriculum. An electronic faculty handbook is available at www.med.mun.ca/Medicine/FacultyAffairs/Faculty-Handbook.aspx and in collaboration with Student Affairs an electronic student handbook is available at www.med.mun.ca/StudentHandbook/. There is also a new mobile/web app, Ask Buddy, which is designed to assist medical students find relevant information. This is available at www.med.mun.ca/AppQA.aspx.
TECHNOLOGY AN INTEGRAL PART OF CURRICULUM

The complexity of the new curriculum required software capable of storing and showing the relationships between learning objectives, content, assessments and program competencies. After an extensive search for such a system, it was determined that no current Learning Management Systems (LMS) or other educational software was appropriate.

Steve Pennell, manager of the Health Education Technology and Learning team, advised the Medical Education Leadership Team of the need to create a system that would support an integrated competency focused, curriculum blueprinting and mapping system. After six years of development, CBlue has become a software product that has enabled the Faculty of Medicine to build curriculum, support assessment and accreditation processes and enable learner-focused feedback.

Using metadata, content within CBlue is also tagged with the Committee on Accreditation of Canadian Medical Schools (CACMS) Standards and Elements. A team from the Undergraduate Medical Education Office and the eLearning unit meet weekly to review content and tag relevant sessions to the CACMS Standards and Elements. The idea is to generate an evidence-based report of the CACMS Standards and Elements related to multiple curriculum standards.

CBlue software, which has evolved into a company called CBlue Software Inc., has not only improved curriculum management at Memorial’s Faculty of Medicine, but has also been receiving attention externally. Université Laval has already adopted it and other universities with complex curriculums have expressed interest in the software.

RESEARCH INTEGRATED INTO CURRICULUM

ONE OF THE MAJOR CHANGES in the new undergraduate medical curriculum is the way research is taught. It is designed in a more formal way so medical students can take one project and develop it through the four phases of the curriculum.

First-year medical students pick a research project and are matched with a faculty member as a mentor. Dr. Laura Gillespie, professor of molecular oncology, is one of the faculty taking a lead role in this change.

“With this approach the faculty member is not a supervisor but takes a guiding role,” Dr. Gillespie said. “As a mentor I can help the student decide on a research question, which determines what will be done throughout the four phases of the curriculum. So far we’ve found that students are taking on a wide variety of projects and are very enthusiastic.”

In addition to the guidance provided by their mentor, students will receive official instruction, in the form of didactic lecture and e-modules, throughout the four phases of the curriculum. For instance, during Phase 1 students will do a literature review on their topic and health sciences librarian Lindsay Glynn will present a seminar on how to do this most effectively.

In Phase 2, students will develop their research question and determine if they need ethics approval. “Even if the project doesn’t require ethics approval, each student will prepare a mock ethics application to learn the process,” said Dr. Gillespie.

Phase 3 involves data collection and analysis, learning the techniques of how to conduct experiments and evaluate data.

In Phase 4 students will disseminate the results of their project by preparing a manuscript or making a presentation at a research conference. “In June 2015 the each student in the Class of 2017 presented a power point on their project and it was absolutely amazing what they had accomplished,” said Dr. Gillespie.

Dr. Gillespie is serving as mentor to two students at the moment and notes that with a class of 80 each year it might eventually mean mentoring eight students. “I love to teach and the enthusiasm from the students is invigorating.”

As with the old curriculum, students can apply to do a summer research project to further their understanding of the process. “It’s essentially up to the student regarding the time they dedicate to their research projects.”

Dr. Gillespie noted that the advantage of being part of a small medical school is that there is an opportunity to meet and work with clinicians. “Most researchers, like myself, have ongoing collaborations with clinicians. We haven’t gone through all four phases of the new curriculum with this new approach, but so far I’ve been pleased. A lot of the physicians we train will be involved in research during their careers and we want them to have a broad background in research techniques.”

Clinical faculty are also becoming more involved in mentoring medical students in research projects. Dr. Ravi Gullipalli, former research director for the Discipline of Radiology, is enthused about the integration of research into the new curriculum. “It helps medical students get exposed to the fundamentals of research before they enter residency.”

He said medical students come looking for ideas for research projects. “For example, we have two medical students and two residents working on raising awareness about new technology for treating diabetic feet. The medical students are looking at the best way to educate family doctors about this.”

When clinical faculty pair medical students with residents it creates a synergy in the research enterprise. The residents get experience teaching and in many cases both the resident and the medical student will have publications to show for their collaboration. “Pairing medical students with residents is a way of ensuring students get the best value,” said Dr. Gullipalli.
IN 2013 the Faculty of Medicine launched a new medical school admissions interview process called TaMMI, which is a hybrid of a traditional interview and multiple mini interviews (MMI).

Most medical schools in Canada have replaced the traditional panel interview with the MMI. McMaster University, which has championed the process in Canada, has shown that candidates who are admitted based on scoring well on MMIs do better on subsequent licensing exams than those who are admitted to medical school based on other assessment processes. However researchers from the University of Manitoba have reported on a study that suggested medical school applicants who graduated from rural high schools fare worse than candidates from urban high schools on the MMI, despite comparable GPA scores.

This is a concern at Memorial, where rural students are a priority area. Also, research at Memorial has shown the benefits of the traditional panel interview, so it was decided to develop a hybrid of both the traditional and the MMI and conduct research to compare how students do.

“What is remarkable is that we are one of the first medical schools to combine the traditional interview and the MMI,” said Dr. James Rourke, dean of medicine. “We are a leader in this way and recognize the importance of doing research to see how they compare. This research is at the forefront of medical school admissions around the world.”

The launch of TaMMI on Nov. 16, 2013, was a well-organized process co-ordinated through the Admissions Office and the Clinical Learning and Simulation Centre. Interviewers came from throughout Newfoundland and Labrador, New Brunswick and Prince Edward Island and included physicians, professors, community representatives, Aboriginal and rural representatives, medical students and residents. The whole process involved 250 applicants, 150 interviewers, 50 medical students and 50 staff co-ordinators.

Memorial and Calgary are two medical schools in Canada, along with 30 medical schools in the U.S.A., participating in the validity study of the overall new MCAT exam.

A CRITICAL PART of the expansion of the medical school was the development of the Rural Medical Education Network (RMEN). Through better alignment of training opportunities across all disciplines at the undergraduate and postgraduate levels, RMEN is enabling the Faculty of Medicine to achieve its mission.

Dr. Mohamed Ravalia was appointed assistant dean for RMEN in January 2011. He continues to be based in Twillingate, where he is senior medical office at the Notre Dame Regional Health Centre. Physician leads have been developed in the four regional health authorities, along with administrative support.

In the new curriculum, medical students spend a minimum of four months in rural communities, with the opportunity to do a maximum of 14.5 months in rural areas. One of the big changes that developed with RMEN is that housing for students and residents is now the responsibility of the Faculty of Medicine rather than the regional health authorities.

“We’re a rural medical school and we have to get our students out in rural areas,” said Dr. Don McKay, associate dean for undergraduate medical studies. “It’s a big task that requires proper housing.”

“We are a leader in this way and recognize the importance of doing research to see how they compare. This research is at the forefront of medical school admissions around the world.”

“Increasing rural experiences for medical students”

“...and pursue careers in rural medicine. Creating a pipeline to practice has been successful in several communities, and having a network in place that offers support to our trainees is a crucial part of this equation.”
THE FACULTY OF MEDICINE’S commitment to public engagement and social accountability is woven throughout its education, research and service activities.

This was recognized internationally in 2014 when the Faculty of Medicine received an ASPIRE Award of Excellence in Social Accountability of Medical Schools, presented at that year’s International Conference in Medical Education in Milan, Italy.

The ASPIRE awards were created by the Association for Medical Education in Europe (AMEE), an international association for medical education, to set high international criteria and a rigorous process to recognize medical schools that have demonstrated excellence. Memorial University is now one of only five medical schools to be recognized worldwide by the association for excellence in social accountability.

The award assessed Memorial’s commitment to social accountability in four areas: organization and function of the school; education of medical doctors; research activities; and impact on communities served. These four areas are reflected in numerous ways within the faculty.

“We start right from high school through our summer MedQuest program, which introduces high school students to careers in health-care professions,” said Dr. James Rourke, dean, Faculty of Medicine. “We’re really connecting with communities throughout the entire province. Between 30-40 per cent of our undergraduate medical students come from rural areas, compared to a Canadian average of 11 per cent.”

The Division of Community Health and Humanities has a number of initiatives that link directly with social accountability. These are the student-led Gateway initiative, which provides refugees with medical care, the Aboriginal Health Initiative and the Global Health Initiative.

“Permanent offices have been set up to lead these initiatives,” said Dr. Shree Mulay, associate dean of community health and humanities. “I credit Dean James Rourke with ensuring that the co-ordinator positions are permanent. He is very receptive to new initiatives such as Global Health. He encouraged us to proceed with it but didn’t try to control the process. I think his biggest talent has been to have an open mind; he is open to new ways of doing things.”

Dr. Mulay is also looking forward to including three additional streams in the Division of Community Health and Humanities’ masters of public health program – global health, Aboriginal health and health informatics.
GATEWAY PROJECT ENGAGES MEDICAL STUDENTS WITH REFUGEE COMMUNITY

BY HELPING newly-arrived refugees access the Canadian health care system, the MUN Med Gateway Project provides the opportunity for medical students to learn valuable clinical skills, gain exposure to cross-cultural health care, and practice leadership and community action.

The volunteer project, started in 2005 by two second-year medical students, is now an established program in the Faculty of Medicine, in partnership with the Association for New Canadians (ANC) and Eastern Health. On Tuesday afternoons, first- and second-year medical students volunteer at Gateway sessions where they develop medical histories for refugees, under the supervision of family doctor Pauline Duke.

In many cases, English is not the first language of the participants, so translators facilitate discussion with the medical students. These histories are stored in the Faculty of Medicine's secure database and, with participant consent, the information gleaned from the interviews is used anonymously in research that aims to improve the health outcomes for new Canadians.

Gateway also matches refugee participants with a family physician based on location/accessibility, medical and cultural needs, and shares the participant’s medical history with the family physician. The ANC then works with participants and their physicians to arrange appointments, translation services and transport.

In September 2015 the Refugee Health Clinic, staffed by Dr. Duke and Dr. Christine Bassler, opened to accommodate refugee families seen through Gateway. Because of the large number of Syrian refugee arrivals since December 2015, Dr. Duke and other physicians have accommodated these families directly at the clinic. Approximately 300 refugees from Syria, Eritrea, Sudan, Iraq, Bhutan, Palestine and Congo have been seen at the clinic since its opening. Dr. Duke, the ANC, the clinic and Gateway staff have been working collaboratively to refer Syrian families to physicians in the community once the initial interviews, screenings, blood work and immediate health concerns have been addressed. Medical students have been volunteering at the clinic and Dr. Duke has been making herself available to physicians in the community as a resource.

One of the latest activities developed by students for refugees is Cooking Together. The Cooking Together program has four components: Cooking Together with the ANC Men’s group, Cooking Together with ANC Women’s group, Bridges to Hope and the ANC Young Adult’s group. The men’s and women’s group sessions are usually held at a local church hall as single events that happen a few times a year.

The six-week Bridges to Hope program takes place in their community kitchen. Medical students help refugees learn to cook healthy, cost-effective meals, in an environment that celebrates team building, communication and socialization. The impetus for Cooking Together began in 2013 from medical students who were interested in working with newcomer refugees on food and nutrition and from a need to address social isolation among new refugees.

Gateway volunteers also lead and participate in several other initiatives, including hosting an annual holiday festivity for newcomers, purchasing car seats and vitamin D supplements for families and assisting with well-women clinics.
THE GROWING INTEREST in global health among medical students, residents and faculty was the impetus behind establishing a Global Health Office in the Faculty of Medicine in April of 2012.

“Our focus moves well beyond ethically grounded and socially accountable international experiences to include increased awareness of the social, political and economic factors that contribute to health inequities,” explained Dr. Jill Allison, global health co-ordinator.

In addition to numerous international electives, the Global Health Office, part of the Division of Community Health and Medicine, is developing service learning opportunities to offer students the chance to work with marginalized populations in the downtown core of St. John’s. “Through service learning, students gain insights by providing services for people with complex health and social needs where they are,” said Dr. Allison. “This also supports the work of other agencies in the community.”

Internationally, medical students and residents from Memorial have gone to Haiti, through Team Broken Earth, as well as India, Nepal, South Africa, Egypt, Ecuador, Mexico, Australia, Malaysia, Vietnam, Ghana and Singapore, and a number of European countries for clinical training opportunities. As well, plans are underway to develop electives for family medicine residents in Uganda. There are institutional partnerships with the Patan Academy of Health Sciences in Kathmandu, Nepal, Witwatersrand University in Johannesburg, South Africa, Queensland University and the University of Tasmania in Australia, and the Civic Hospital in Guadalajara, Mexico.

In preparation for these trips all students and residents take part in a pre-departure training program that provides information on personal health and safety, travel safety, cross-cultural communication and language, cultural responsiveness, competency and humility, and ethics in international and low-resource settings. The program takes place over a full day and features guest speakers, discussion groups, movies and case studies.

The Global Health Office supports global health teaching and learning in undergraduate and postgraduate medical education in the Faculty of Medicine and graduate programs in the Division of Community Health and Humanities.

Promoting advocacy for global health issues is also an important part of the mandate of the Global Health Office. “Our goal is to raise awareness about global health issues among students and the general public, with a focus on global and local marginalized and vulnerable populations,” said Dr. Allison. “By collaborating both on a national level and international level, with other universities, and locally, in our communities, we are developing and advancing initiatives, sharing ideas, and fostering a deeper sense of global citizenship.”

By integrating global health education into the curriculum, Dr. Allison said trainees will be able to identify barriers to health equity as well as identify social, political and economic determinants of health and develop skills for health and human rights advocacy.
PREPARING THE HEALERS OF TOMORROW

RECOGNIZING THE NEED to increase the numbers of health professionals from the Aboriginal community, in 2008 the Faculty of Medicine applied for funding from the federal Aboriginal Health Human Resources initiative to establish the Aboriginal Health Initiative (AHI) at Memorial. Dr. Michael Jong, full-time clinical faculty member in Happy Valley-Goose Bay and Dr. Catherine Donovan, associate professor of clinical public health, are co-chairs of this initiative.

Dr. Carolyn Sturge Sparkes was hired in November 2008 as co-ordinator the AHI, and by January 2009 the first board meeting was held to oversee the new program. The board includes representatives from the partner communities of the Innu Nation of Labrador, the Miawpukek First Nation, Nunatsiavut, NunatuKavut, and Qalipu Mi’kmaq First Nation Band.

By the fall of 2009, the first pathway program was developed for Aboriginal students studying at Memorial who were interested in a career in medicine. This program, identified as the Pre-Med Orientation, familiarizes Aboriginal students with the admission process and links students with medical student mentors. Initially two seats per year were allocated for self-identified Aboriginal students and this number was increased to three seats with the 2013 expansion of the entering medical class. The first Aboriginal students entered medicine in 2011 and by 2015 two had graduated. Nineteen are currently at Memorial in undergraduate medical studies. As well, four students who had availed of at least one of the pathway offerings are currently studying medicine elsewhere in Canada.

By March 30, 2010, federal funding for the AHI ended and the Faculty of Medicine took over funding this initiative. In addition to the Pre-Med Orientation/Mentorship Program, recruitment pillars include: school visits to Aboriginal communities; reservation of two seat for Aboriginal students in MedQuest, a summer program in St. John’s open to all high school students in Newfoundland and Labrador; and the MCAT Prep Grants whereby funding up to $1,000 is available for Aboriginal students to help them prepare to write the Medical College Admission Test. As well, a Pre-Med Summer Institute for Aboriginal students was offered for the first time in 2011 at the Labrador Health Centre in Happy Valley-Goose Bay.

To increase outreach into Aboriginal communities, a summer camp was created to expose students to the various health care professions. “We realized we needed to reach out and deepen our programs to sow seeds in younger people, so in 2015 we offered the Healers of Tomorrow Gathering to high school students, funded through the International Grenfell Association,” said Dr. Sturge Sparkes. “We are hoping to offer this every second summer.”

A support pillar is currently in place for students in the undergraduate medical education program. The Med Friendship Circle is a student-run association for First Nations, Inuit, Metis and non-Aboriginal medical students designed to build bridges of understanding.

The AHI co-ordinator is currently developing various options in service learning co-curricular opportunities for undergraduate medical students. In addition to the already-established mentorship program, these opportunities will include Kamajik, a type of shadowing activity with the Aboriginal Patient Navigators with Eastern Health, and engaging in projects with the St. John’s Native Friendship Centre.

In addition to increasing the number of Aboriginal medical students, the AHI enriches the undergraduate medical education curriculum by including case study and problem-based clinical situations that focus on Aboriginal Peoples and their wellbeing. The AHI has also enhanced the Masters of Public Health program by offering sessions that foster cultural relevance and sensitivity.
As a PhD candidate in the Faculty of Medicine, Dr. Pardis Pedram is researching possible causes of obesity in order to develop more effective treatment and prevention. Her supervisor is Dr. Guang Sun, professor of medicine and head of the Complex Diseases Laboratory where the DEXA (Dual Energy X-ray Absorptiometry) scanner is located.
THE RESEARCH ENTERPRISE in the Faculty of Medicine has grown steadily in the last 12 years, reaching a high of $36.9 million in 2011-2012 with the influx of funding for the new Genetics Centre. Along with this, the number of graduate students has also increased by about 60 per cent, from 185 in 2004 to 299 in 2015.

The Office of Research and Graduate Studies (RGS) provides administrative support for faculty members to access funding for research projects; this office also oversees graduate studies. There are two associate deans – Dr. Reza Tabrizchi, associate dean of research and graduate studies and Dr. Proton Rahman, associate dean of clinical research. Dr. Jules Doré is the assistant dean of graduate studies.

Since 2014, the number of graduate programs offered in the Faculty of Medicine has increased from eight to 10. In addition to graduate programs in applied health services research, cardiovascular and renal sciences, cancer, clinical epidemiology, community health, human genetics, immunology and neuroscience there are now graduate programs in public health (masters) and health ethics (masters).

With federal funding becoming harder and harder to acquire, the dean of medicine, Dr. James Rourke, expanded internal research funding during the last several years.

Funding through the Medical Research Endowment Fund (MRF) has been increased substantially through the Dean’s Innovation Fund Grants Program, initiated in April 2013. MRF grants provide critical support to research projects at an early stage, allowing research to progress on important new and innovative ideas and attract support from other health researchers and funding agencies.

In introducing the new funding program, Dr. Rourke explained that with the ending of the Canadian Institutes of Health Research (CIHR) Regional Partnership Program and no provincial committed health research fund, it was becoming very difficult to develop the strong collaborative research teams that are so important in today’s increasingly competitive national research award climate. “The Dean’s Innovation Fund Grants Program will foster research innovations and collaborations that will build competitive research teams to lead to new programs of externally funded research that will benefit Memorial University and the people of the province.”

These awards consist of a fall competition featuring three Dean’s Innovation Project Grants ($45,000) plus a Cox Award ($50,000) to the top ranked applicant. The spring competition consists of up to eight Dean’s Innovation Research Development Grants ($20,000) to fund small research projects and the collection of preliminary data in support of the development of an application to an external granting agency.

Since 1992, the MRF has supported more than 50 research projects through Research Development Awards and the Cox Award. More than one million dollars in research funding has been disbursed. MRF awards provide critical support for the development of health science research projects, often enabling new ideas and collaborations to be developed to a point that they may attract major funding from external granting agencies such as the Canadian Institutes of Health Research.

For further information on MRF awards, or tax-free donations to the endowment, please visit www.med.mun.ca/mrf/.
FELLOWS OF THE CANADIAN ACADEMY OF HEALTH SCIENCES

Election to fellowship in the Canadian Academy of Health Sciences (CAHS) is considered one of the highest honours for individuals in the Canadian health sciences community and carries with it an agreement to serve the academy and the future well-being of the health sciences. Since 2005, seven members of the Faculty of Medicine have been elected to this prestigious academy.

2014

DR. THOMAS MICHALAK is an international authority in the field of viral hepatitis and liver diseases. Since 2001 he has been the Senior (Tier 1) Canada Research Chair in Viral Hepatitis and Immunology at Memorial. His groundbreaking discoveries have changed fundamental concepts about the nature of Hepatitis B and C viral infections, which affect more than half a billion people globally and have a direct impact on the safety of Canada’s blood supply and organ transplantation.

In 1985 Dr. Michalak realized the outstanding benefits of using the woodchuck animal model for HBV research. He has established one of the top research facilities in the world using woodchucks infected with WHV (woodchuck hepatitis virus), which has provided many significant findings.

In recent years, one of the most important contributions of Dr. Michalak’s was the characterization of occult HCV persistence in individuals whose disease was through to be resolved either spontaneously or after antiviral therapy. His group was the first to report, in 2004, the existence of this form of HCV infection, suggesting that the hepatitis C virus is a chronic condition and that it may persist despite the absence of clinical symptoms, biochemical evidence of liver injury or detection by routinely available clinical laboratory tests.

2013

Dr. Jane Green, professor of genetics, has been at the forefront of genetic research of hereditary cancers and hereditary eye diseases for 35 years. Her studies led to the discovery of novel genes in Newfoundland and Labrador families and a new understanding of pathways to development of cancer and blindness. She works closely with molecular geneticists and genetic counsellors, and families participating in the research have benefited from clinical and genetic screening programs developed and implemented based on the research. In 1993, her research was key to identifying a major colon cancer gene and to the provision of genetic testing.

Dr. Green pioneered the development of screening programs for earlier and more successful treatment of hereditary tumours. Her work has saved lives and profoundly improved health and quality of life for hundreds of Newfoundlanders. In 2012 she received the Founders Award for Excellence in Medical Genetics from the Canadian College of Medical Geneticists for her significant lifetime contributions to the college and to the genetics community in Newfoundland, Canada and beyond. In 2008 she received a Knowledge Translation Award from the Canadian Institutes of Health Research (CIHR), which allowed her to visit all 28 hospitals in the province 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. In 2014 she was inducted into the Order of Newfoundland and Labrador, the highest honour of the province.

2013

Dr. Proton Rahman is an international leader on the genetic basis of inflammatory arthritis. His pioneering research has led to the identification of numerous novel genes that contribute to the pathogenesis of psoriatic arthritis and ankylosing spondylitis. In collaboration with an international psoriasis consortium, he has identified over half of all psoriatic arthritis genes reaching genome-wide significance.

Dr. Rahman is a professor of medicine (rheumatology) and associate dean for clinical research in the Faculty of Medicine. In addition to his work on inflammatory arthritis he has pioneered the development of the Newfoundland Genealogical Database (NGD) by creatively using information collected for census data. The NGD provides clinicians and researchers with rapid access to a detailed patient pedigree and genealogy linkage with health outcome and pedigree visualization.
Dr. Rahman has published widely in top subspecialty based genetics and rheumatology journals and his contribution to rheumatology research has been recognized with regional, national and international awards. In 2012 he was named University Research Professor, the most prestigious award Memorial gives for research. He received the President’s Award for Outstanding Research in 2003 and the National Biotechnology Leadership Award in 2004 from the Newfoundland and Labrador Association of Technology Industries. He was named one of Canada’s Top 40 Under 40 for 2003 by the Globe & Mail’s Report on Business magazine.

**2011**

**DR. DALE CORBETT**, former Tier 1 Canada Research Chair in Stroke and Neuroplasticity at Memorial, is currently a professor of neurosciences at the University of Ottawa and scientific director and CEO of the Heart and Stroke Foundation Centre for Stroke Recovery.

Dr. Corbett’s pioneering research on the protective effects of prolonged hypothermia is used worldwide for treating cardiac arrest patients and has led to the use of “therapeutic hypothermia” in the treatment of cardiac arrest and perinatal asphyxia. His current research focuses on identifying cellular factors that limit neuroplasticity and recovery, and the optimal timing and intensity of post-stroke rehabilitation. His research approach uses novel forms of rehabilitation, drug therapy and stem cells.

**2010**

**DR. JAMES ROURKE**, who has served as dean of medicine and professor of family medicine at Memorial since his appointment in April 2004, has a long-standing interest in rural medicine and medical education and is a recognized leader at provincial, national and international levels. He was chair (2004-2007) of the WONCA (World Organization of Family Doctors) Working Party in Rural Practice that has organized 10 world rural health conferences and he was involved in developing a joint WONCA/WHO project “Health for All Rural People.” He is the current chair of the Canadian Medical Forum (CMF) and chair of the AMEE Aspire to Excellence Panel on Social Accountability of Medical Schools.

Dr. Rourke was an active rural family physician (including obstetrics and emergency work) in Goderich, Ontario for 25 years with his wife and partner Dr. Leslie Rourke. Their practice was one of the primary UWO Rural Family Medicine teaching sites. He was the founding director of the Southwestern Ontario Rural Regional Medical Education, Research, and Development Unit.

Dr. Rourke has received many honours and awards, including an honorary degree from the University of Western Ontario (2009); the Society of Rural Physicians of Canada, Rural Leadership Award (2009); the College of Family Physicians of Canada, W. Victor Johnston Award (2007); the College of Physicians and Surgeons of Ontario Council Award College of Physicians and Surgeons of Ontario Council Award (2004) and the D.I. Rice Merit Award from the College of Family Physicians of Canada.

**2008**

**DR. PATRICK PARFREY** is a clinical epidemiologist and nephrologist, and professor of medicine (nephrology). In 2013 he was named a John Lewis Paton Distinguished University Professor at Memorial, awarded in recognition of his extraordinary contributions across the continuum of teaching and learning, research and public engagement.

Dr. Parfrey’s major research interests are in patient-related problems associated with kidney disease and genetic disease, together with issues in health-care delivery. He heads up research teams in three major areas: clinical epidemiology in nephrology, the clinical and genetic epidemiology of inherited diseases, and health care delivery research.

Dr. Parfrey’s research has had a global impact on the management of cardiac disease in chronic kidney disease, treatment in end-stage kidney disease, hepatitis in end-stage kidney disease, contrast media induced acute kidney disease and inherited cystic disease of the kidney.

As lead of the Interdisciplinary Research Team in Human Genetics, Dr. Parfrey...
spearheaded a successful application to the Canada Foundation for Innovation to establish a genetic research centre at Memorial University: The Craig L. Dobbin Genetics Research Centre is now located on levels three, four and five of the new building.

Dr. Parfrey holds a University Research Professorship from Memorial University. He is a Fellow of the Royal Society of Canada (2009) and has received the Canadian Society Nephrology Award for Outstanding Service, the Queen Elizabeth II Diamond Jubilee Medal and was named Officer to the Order of Canada in 2004.

2005

DR. IAN BOWMER is a professor of medicine (infectious diseases) and was dean of the Faculty of Medicine from 1996-2003. In January of 2004 he became one of 13 non-governmental appointees to the Health Council of Canada.

Dr. Bowmer’s research expertise is concentrated in the area of AIDS and HIV disease. In 1993-94 he was chair of College of Family Physicians of Canada’s National Working Group for Comprehensive Care for Persons with HIV. He also chaired the college’s National Working Group on HIV Therapies for Infants, Youth and Children. He is co-editor of the college’s publication A Comprehensive Guide for the Care of Persons with HIV Disease, Adult and Pediatric Module.

Dr. Bowmer’s professional activities also include serving as chair of the Board of Community Health – St. John’s Region.

Nationally, he has been president of the Medical Council of Canada and was a member of the council and chair of the accreditation committee of the Royal College of Physicians and Surgeons of Canada.

Dr. Bowmer has received a number prominent awards for his work in medical education. In the fall of 2003 the Medical Council of Canada awarded him the Dr. Louis Levasseur Award for outstanding contributions towards the vision and mission of the MCC. In 2004 he received the Canadian Professors of Medicine Christie Award, awarded to a former chair of medicine who has made an outstanding contribution to academic medicine in Canada.

2005

DR. DAVID HAWKINS (deceased) served as the Faculty of Medicine’s third dean from 1987-1995. He was involved in every facet of academic medicine since beginning his medical studies. The author of more than 100 scientific publications, he served as president of the Canadian Society for Clinical Investigation, interim president of the Medical Research Council of Canada.

Dr. Hawkins paid close attention to the Faculty of Medicine’s research enterprise and turned his own rheumatology laboratory over to become the Terry Fox Cancer Research Laboratory. The author of more than 100 scientific publications, he was a fellow of the Royal College of Physicians and Surgeons of Canada, the American College of Rheumatology, an adjunct professor of Paediatrics at the University of Ottawa, and consultant rheumatologist at the Children’s Hospital of Eastern Ontario.

Honours received by Dr. Hawkins during his life include an endowed lectureship in health sciences research at Memorial (1993), Alumnus of the Year of the Dalhousie Medical Alumni Association (1995) and Distinguished Rheumatologist of the Year (2005) of the Canadian Rheumatology Association.

OUTSTANDING RESEARCH

Many researchers in the Faculty of Medicine have been recognized with Memorial University President’s Awards in the last 12 years. In addition to researchers already identified in the section on Canadian Academy of Health Sciences, the following researchers have received President’s Awards.

UNIVERSITY RESEARCH PROFESSOR

DR. CHRISTOPHER KOVACS was named University Research Professor in 2014. This is the most prestigious award the university gives for research. It goes to faculty who have demonstrated a consistently high level of scholarship, including graduate student supervision and other mentoring activities, and whose research is of a truly international stature.

Dr. Kovacs’ clinical practice focuses on osteoporosis, disorders of bone metabolism, thyroid disorders and general endocrinology. His basic and translational research focuses on adaptations in calcium and bone metabolism that
occur during reproduction and fetal development. He has been continuously funded for his research by CIHR/MRC since 1999.

He has received over a dozen national and international awards for excellence in research, including the 2003 Gold Medal in Medicine from the Royal College of Physicians and Surgeons of Canada; the 2003 Young Investigator Award from the Canadian Society of Endocrinology and Metabolism, and Young Investigator Awards from the American Society for Bone and Mineral Research and Advances in Mineral Metabolism. He has served on editorial boards of journals, CIHR (Canadian Institutes of Health Research) and NIH (National Institutes of Health) grant committees, and as a reviewer for grant agencies in Canada, U.S.A., England, Ireland, and Australia. He was also on the Institute of Medicine/National Academies of Science USA Committee to Review Calcium and Vitamin D. He is the president of Advances in Mineral Metabolism for 2015-2017.

PRESIDENT’S AWARD FOR OUTSTANDING RESEARCH

This award recognizes young researchers who have made outstanding contributions to their scholarly disciplines.

2012

DR. MANI LARIJANI is an associate professor of immunology and infectious diseases and oncology in the Division of Biomedical Sciences. His research focuses on DNA-mutating processes which modify human and viral genomes. These processes are involved in immune responses and the evolution of viruses and cancers, particularly very aggressive leukemia and lymphomas.

Research in Dr. Larijani’s lab involves understanding the molecular mechanisms of these DNA-mutating enzymes, how their activity is regulated inside cells and, finally, how they impact diseases such as immunodeficiencies, AIDS and cancer.

His work has been published in journals such as Nature, Molecular Cellular Biology, Immunogenetics and Retrovirology.

Dr. Larijani’s research has made significant impact across the fields of structural biology, enzyme biochemistry, immunology, virology, cancer research, evolutionary and developmental biology. He has received many awards for his research. In 2015 he was awarded the Canadian Society for Immunology New Investigator award, given to one individual in Canada as recognition of their excellence and impact of research contributions. Other peer-reviewed awards and recognitions in the last five years include a CIHR New Investigator Salary Award, the Terra Nova young innovator award and the Wallace Ingram Award for Faculty in Medicine.

2010

DR. MARIA MATHEWS is an applied health services researcher in the Division of Community Health and Humanities. Her research looks at functioning of the health system. It falls into two broad themes: Physician workforce issues and accessibility of cancer care. She uses both quantitative and qualitative research methods and her projects routinely involve knowledge translation components.

Dr. Mathews is currently looking at building a research database to examine physician workforce issues in Newfoundland and Labrador. She has also researched the retention of locally-trained medical graduates in Saskatchewan and NL, examining physician mobility and the factors related to attracting and keeping different generations of physicians. Her research on wait time related experiences, satisfaction and expectation for cancer care examined patients’ satisfaction with wait times for breast, lung, prostate and colorectal cancer.
DR. TERRY-LYNN YOUNG is a molecular geneticist. In 2003 she established a research laboratory funded by the Canada Foundation for Innovation (CFI), dedicated to genetics/genomics research and translation of unmet, medically-important diseases segregating in the province’s unique founder population. Notable discoveries include the finding of a novel gene causing a highly lethal form of cardiomyopathy in 24 extended NL families, due to a strong founder effect, and the first gene causing otosclerosis, a common form of conductive hearing loss.

Dr. Young’s research has been continuously funded by grants from CIHR, Genome Canada, Atlantic Canada Opportunities Agency and the Canadian Foundation for Innovation (CFI). She was a co-principal investigator on the infrastructure grant which led to building the Craig L. Dobbin Genetics Research Centre. She has received a Community Recognition Award (Advocacy) from the Canadian Hard of Hearing Association-NL for her research and translation efforts.

Dr. Young currently leads an interdisciplinary team exploring the ethical, economic, legal and social implications of inherited cardiomyopathies and the application of genomics to make better products and services for the hearing impaired.

DR. JOAN CRANE is a maternal fetal medicine specialist and professor of obstetrics and gynecology, with a cross-appointment in clinical epidemiology. Her research interests include preterm birth prediction and prevention, obesity in pregnancy, the effects of environmental tobacco smoke in pregnancy and induction of labour. She has received numerous research awards from the Society of Obstetricians and Gynaecologists of Canada and the American College of Obstetricians and Gynecologists. In 2010 she received the Association of Professionals in Obstetrics and Gynecology (AOG) National Excellence in Research Award.

Dr. Crane has been a member of a number of committees of the Society of Obstetricians and Gynaecologists of Canada (SOGC), including SOGC Council (Alternate Chair and Chair of the Atlantic Region), the Maternal Fetal Medicine Committee (past chair), Infectious Diseases Committee, ALARM Committee, and the Obstetrical Content Review Committee; and is the principal author or co-author of a number of SOGC Clinical Practice Guidelines. She has served as the president of the Atlantic Society of Obstetricians and Gynaecologists (2007-2008), and has also served on the American College of Obstetricians and Gynecologists District I Council as Atlantic Section Vice-Chair and Chair. She served as the Vice-Chair of the Royal College of Physicians and Surgeons of Canada Obstetrics and Gynaecology Committee, and was on its Examination Committee. She is currently a member of the Royal College of Physicians and Surgeons of Canada Maternal Fetal Medicine Examination Committee.

PROMOTING EXCELLENCE
To promote and acknowledge members of the Faculty of Medicine for excellence in research, Dr. James Rourke, dean of medicine, launched the Research Excellence Awards in 2012. These awards are presented every second year. In 2015-2016 two awards for staff were added plus the Max House Teaching Award for Excellence in CME/CPD. A total of 10 awards have been presented since 2013.

SENIOR FACULTY AWARD (CLINICAL)

DR. SEAN CONNORS, cardiologist, for his work as cardiac clinical lead for the team genetic/cardiac research projects which were aimed at elucidation the underlying genetic cause of arrhythmia and early sudden death (SCD). The team discovered a new causative gene for several families with arrhythmogenic right ventricular cardiomyopathy (ARVC) causing early SCD in Newfoundland.

This research has taken on international significance as the team has subsequently learned that this gene is not limited to families in Newfoundland. This gene is now included
in all commercially available genetic panels used for the diagnosis of ARVC worldwide. A recent publication by the team demonstrates an astonishing improvement in life expectancy in family members with the ARVC5 mutation who received prophylactic implantable cardiac defibrillator (ICDs) compared to that expected without ICD implantation. Dr. Connors has inserted ICDs in hundreds of consecutive family members at risk of sudden cardiac death; his work is a classic example of the integration of research efforts with local clinical care.

MID-CAREER (CLINICAL)  
2013  
DR. LEIGH ANNE NEWHOOK for her work on juvenile diabetes in general and a province-wise hospitalization of juvenile diabetic ketoacidosis (DKA), the results of which are being disseminated throughout knowledge translation and quality initiatives.

MID-CAREER (NON-CLINICAL)  
2013  
DR. GUANG SUN for his research on obesity and diabetes in human subjects at different levels including a study to measure gene expression profiles in fatty tissue at a fasting state and in response to a seven-day overfeeding challenge in both lean and overweight/obese young men. Dr. Sun has also pioneered the Complex Diseases in the Newfoundland Population Environment and Genetics (CODING) study which incorporates data from approximately 3,000 residents of the province and investigates the link between candidate genes and variations in food intake, body weight, fat percentage, fat distribution and hormones secreted by the gastrointestinal tract, adipose tissue and other related organs.

JUNIOR CAREER AWARD (CLINICAL)  
2013  
DR. JOHN THOMS, an oncologist at the Dr. H. Bliss Murphy centre, for his translational work in the area of prostate cancer which is extremely important as many patients with this disease ultimately develop resistance to hormonal therapy and chemotherapy. In addition to awarded funding from the Department of Health and Community Services as well as the Motorcycle Ride for Dad, Dr. Thoms has applied for a number of other grants at the federal and provincial levels. He is a member of a large consortium of researchers from across Canada who have applied for a five-year grant from the Prostate Cancer Program Targeting Aggressive and Lethal Cancers.

JUNIOR CAREER AWARD (NON-CLINICAL)  
2013  
DR. ROD RUSSELL for his research on the molecular virology of the hepatitis C virus. The work performed by Dr. Russell and his team contributes to the identification of novel drug targets for HCV and helps to understand how the virus develops resistance against currently used therapies.

2015  
DR. PETER DALEY for his contribution to clinical research in the field of diagnosis and management of infectious diseases to humans. He is an assistant professor within the Discipline of Medicine, cross-appointed to Laboratory Medicine and Clinical Epidemiology, and infectious disease physician and chief medical microbiologist for the province. Dr. Daley and his students have investigated urinary tract infection in long-term care facilities, transfer of bacteria between humans and animals in an Aboriginal village, mastitis among cows, the impact of laboratory tests on physician behaviour, algorithms of diagnostic tests, performance of commercial diagnostic tests, and recruitment of patients into corporate clinical trials of novel antibiotic therapies.
2015

DR. ATANU SARKAR, assistant professor of environmental and occupation health, for his work on environmental contamination and its potential threat to human health. His focus area is in remote, rural communities of the province, particularly Aboriginal communities. He is studying food security among the most vulnerable communities in the province and is involved in studying aspects of occupational health such as the status and trends in employment benefits at Memorial. His short video documentary, based on his research on uranium exploration (Broken Rocks) is available at www.youtube.com/MunMedicine/.

2015

JANET MCHUGH, admissions office with the Faculty of Medicine, had been involved in admissions for 34 years and this extensive experience and her in-depth knowledge are invaluable assets. She is an extremely dedicated and competent individual who goes above and beyond the call of duty in her commitment to the Admissions Office, the Faculty of Medicine and to Memorial University. She was a key player in the development and implementation of a major change in the interview process to a hybrid of the Traditional and Multiple Mini Interview (TaMMI) in 2013 and she is vital to the ongoing success of this endeavour.

2015

RHONDA ROEBOTHAM, academic program administrator with the Office of Research and Graduate Studies (RGS), for her essential and consistent contribution to the success of graduate programs over the last 15 years. She is responsible for providing academic advising and administrative support for graduate programs within the Faculty of Medicine. Her knowledge and facilitation of the thesis process are invaluable to students. She demonstrates an extraordinary dedication in going the extra mile in her role of co-ordinating and invigilating the comprehensive exam process.

MAX HOUSE TEACHING AWARD FOR EXCELLENCE IN CONTINUING MEDICAL EDUCATION/CONTINUING PROFESSIONAL EDUCATION (CME/CPD)

2015-2016

DR. SUSAN MACDONALD is an award-winning educator in the undergraduate medical program as the primary teacher of palliative care in all four years. She is an associate professor of medicine and family medicine as well as the medical director of palliative care for the Eastern Region. She teaches at the postgraduate level in both family medicine and medicine residency programs. She is instrumental in providing education for physicians, other health care professionals and residents/students.

Dr. MacDonald continues to demonstrate excellence in all aspects of CME/CPD planning and teaching and her dedication and commitment to providing teaching to health care professionals and the general public in the area of palliative care is inspirational.
BEST IN CANADA FOR PRODUCING RURAL DOCTORS

THE FACULTY OF MEDICINE has been honoured six times since 2000 by the Society of Rural Physicians for excellence in producing rural doctors.

The 2016 Keith Award looked at the largest number of graduates practising in a rural area 10 years after graduation. As the top medical school in the country, Memorial’s average was 38.9 per cent; the national average was 18 per cent. Family medicine residents were taken into account and identified through the Canadian Post-MD Educational Registry. Practice locations were identified from the Canadian Medical Association database 10 years later.

Memorial’s postgraduate residency training program in family medicine provides an opportunity for training physicians to take advantage of specific locations available to them.

The program’s unique training model includes stream sites in Newfoundland and Labrador ranging from eastern, central and western regions, as well as the Nor-Fam training centre in Goose Bay N.L., and the new site in Nunavut. These locations allow training residents to complete the vast majority, if not all, of their training within a particular geographical area.

Dr. James Rourke, dean of medicine, said that to help establish a strong connection to rural medicine, all students in the MD program have extensive training and exposure to rural teaching sites throughout the province, as well as opportunities to visit sites in Prince Edward Island, New Brunswick, Nunavut and the Yukon.

As well, the MD program provides a spiral curriculum with rural content interwoven with clinical skills right from the beginning. This innovative curriculum incorporates a narrative approach that allows students to learn about the people and places of Newfoundland and Labrador. By looking at communities and case studies of realistic patients, students have both the information and context to understand issues with much more complexity and depth. These factors encourage students to develop deeper connections to rural communities as they learn from local physicians and interact with patients.

The Faculty of Medicine has previously received the Keith Award five times. In 2009 Memorial also received the society’s rural education award for excellence in producing MD graduates headed to a career in rural medicine.

ESSENTIAL TOOL IMPROVES CHILD CARE

THE 2014 EDITION of the Rourke Baby Record (RBR) was released June 25, 2014, at the Canadian Paediatric Society’s annual conference. The Rourke Baby Record is Canada’s leading knowledge translation tool, guiding health professionals with evidence-based information for efficient and effective well-child care.

Research has shown that use of the RBR system for babies and children up to five years of age is associated with more comprehensive care. This latest edition of the RBR builds on the large knowledge base of its predecessors and brings significant changes and additions to its core health supervision topics. For health professionals, these include the physical exam and up-to-date immunization recommendations, as well as growth monitoring, nutrition assessment and developmental surveillance.

The RBR and its associated resources for health professionals and parents also give guidance on common health issues and parental concerns such as injury prevention, environmental health, and behaviour and family issues. Endorsed by the CPS, the College of Family Physicians of Canada, and Dietitians of Canada, the RBR is available in English and French, and is increasingly becoming incorporated into electronic medical records. It has been adapted for different locations and health care systems, including Ontario, Nunavut, and a variety of health care regions.

The principal investigators are Drs. Leslie Rourke, Denis Leduc, and James Rourke. Drs. Leslie and James Rourke are family physicians and professors in family medicine at Memorial University. Denis Leduc is a community pediatrician and associate professor of pediatrics at McGill University in Montreal.

“When we developed the initial RBR for our rural medical practice in 1979, we could not have even dreamed that this would develop into such a national collaborative project that has impacted so many children,” said Dr. Leslie Rourke.
IN FEBRUARY 2010 the Family Medicine Residency program at Memorial took a leap forward when the federal government announced a total of $9.4 million to support new family medicine residencies in both Newfoundland and Labrador and in Nunavut.

“One of the federal government promises had been to support innovative residency programs to meet the needs of the region,” explained Dr. James Rourke, dean of medicine. “The conditions were, it had to be partnered with the province and with their support we put in an application to put the new residencies in Grand Falls-Winsor and Burin. We were successful in receiving $4.5 million. Then, in partnership with the Government of Nunavut a further $4.9 million was provided to support up to eight newly-graduated doctors to do their family medicine training in collaboration with Memorial University’s Faculty of Medicine.”

Dr. Rourke noted that the partnership with the Government of Nunavut was facilitated by the existing relationship with Dr. Sandy Macdonald, a medical graduate of Memorial and director of medical affairs in Nunavut at the time (now territorial chief of staff for Nunavut’s health department).

Under the Project for Enhanced Rural and Remote Training in Newfoundland and Labrador (PERRT), $4.5 million was allocated to support 16 new family medicine residents over six years who went on to receive rural training in Grand Falls-Winsor and Burin. “As a result of this enhanced rural experience, these family medicine residents are better able to practice in small communities,” said Dr. Rourke.

Funding for the Nunavut Family Physician Residents Project (NunaFam) project provided family medicine residents with a structured and longer-term educational rotation in Nunavut. This extended exposure was designed to encourage residents to stay and work in Nunavut after the completion of their medical training. While based in Iqaluit, residents conducted visits to several communities including those in the Qikiqtaaluk (Baffin) Region.
The NunaFam Project also established a Family Practice Training Centre based at Qikiqtani General Hospital in Iqaluit, the main referral centre for the Qikiqtaaluk Region of Nunavut. The training centre has also provided additional educational and academic networking support for physicians practicing in Nunavut, as well as being a focal training point for residents.

This funding had several important consequences with the expansion of the medical school class by 20 seats in 2013, which meant more newly-graduated doctors needing residencies starting in 2017. The money jump-started the number of new family doctors available to enter practice in 2013 and helped ensure that the new graduates in 2017 would have additional opportunities to train as family medicine residents and become rural family medicine doctors.

The new concentration of residency positions in Grand Falls-Windsor, Burin and Nunavut followed the model developed for the long-standing Northern Family Medicine (NorFam) program, based in Happy Valley-Goose Bay, Labrador. Residents complete 12 months of integrated training in a single community, allowing them to develop longer term relationships with their preceptors and patients, as well as experiencing greater continuity of care and a fuller scope of practice. Residents in Nunavut practice medicine in a remote and culturally unique area for six months in their second year of training and also experience a more varied scope of practice.

“The dean’s vision is that this home-based residency program will lead to better recruitment,” said Dr. Cathy MacLean, past chair of family medicine. “All indications are that this is happening.”

Despite the availability of new rural and remote residencies, the Discipline of Family Medicine found some medical students were hesitant to follow the traditional method of internal matching because they could not be guaranteed to train in their chosen location. In response, a streams model was adopted whereby candidates can now rank their stream preferences in CaRMS. For example, if a candidate would like to go to the Northern-Goose Bay stream in Happy Valley-Goose Bay in Labrador, they can now rank that program at the top of their ranking.

The new residency model was thoroughly successful in 2015 and the Discipline of Family Medicine achieved a 100 per cent placement rate in the first iteration of the Canadian Resident Matching Service (CaRMS). In addition to the new streams-based model, the Family Medicine Residency Program has also adopted a new curriculum. Known as the Triple C Competency-based residency, the curriculum emphasizes comprehension and continuity and is centred in family medicine. “This is based on the way family doctors work,” said Dr. MacLean.

For family medicine residents looking for extra training, the Discipline of Family Medicine now offers the opportunity to complete a third year of enhanced emergency medicine training to six applicants per year. And a new Enhanced Skills in Care of the Elderly has just begun, offering two six-month positions for those with an interest in geriatric medicine.
DEVELOPMENTS IN PRIMARY HEALTH CARE RESEARCH

Dr. Kris Aubrey-Bassler is director of the Primary Healthcare Unit.
OVER THE LAST DECADE there has been a rapid growth in primary care research in the Faculty of Medicine. Established in November 2005, the Primary Healthcare Research Unit (PHRU) exists as a resource within the Discipline of Family Medicine for the conduct of clinical and health services research in the area of primary care and primary health care.

Dr. Marshall Godwin, founding director of the PHRU, said the difference between primary care and secondary or tertiary care is that it is first contact and the conditions seen are often undifferentiated. “For example, when a cardiologist sees someone with chest pain there’s a very good chance it’s heart disease because that person has gone through a filter of the family doctor or emergency room. When I see someone with chest pain it’s most likely not heart disease – I have to sort out one of the many things it might be. Consequently the results of research conducted at the specialty level may not always apply in primary care.”

The research methodologies used in primary care research are standard research methods, but how those methods are applied and the people we apply them to are different, said Dr. Godwin. “For instance, when we do clinical trials, they are likely to be pragmatic trials. We have very few exclusions criteria because we want to be able to generalize the results. We are interested in co-morbidity – the presence of one or more or diseases in addition to a primary disease or disorder – because the patients we see often have multiple conditions and we want to be able to apply our research results to that population of people.”

In 2009 the PHRU organized the first annual Primary Healthcare Partnership Forum (PriFor) in partnership with the Centre for Rural Health Studies and the Atlantic Practice Based Research Network. It was a resounding success with more than 100 participants with three half-day poster sessions and three rooms with presentations and workshops running concurrently. Building on this initial success, each year the forum has grown larger, providing a climate for the sharing and networking of ideas and knowledge to help strengthen research and ultimately, the delivery of primary healthcare locally, regionally and nationally.

Dr. Kris Aubrey-Bassler, now director of the PHRU, headed up the Centre for Rural Health Studies (CRHS) for the past eight years. The CRHS has a vision of improved health for rural and remote populations, realizing this vision by leading, supporting and participating in research designed to improve the health of rural and remote populations. The centre has implemented a successful rural health research faculty development program; 6for6 is a research skills program designed to educate rural and remote doctors from Newfoundland and Labrador, New Brunswick, and Nunavut about research, empowering them to investigate issues relevant to their practice and communities. Six participants are selected annually to complete six teaching sessions on priority topics in research over one year and conduct their own research project. The 6for6 program was developed and delivered by Dr. Cheri Bethune and her research team; the first graduates were in 2015.

A 2016 internal evaluation of the PHRU, based on information collected between February 2014 and March 2016, found that every dollar in operational funding that has been allocated to the PHRU over the past 10 years has brought in $1.80 in funding for its various research projects and programs, nearly doubling the university’s investment. The report found that the PHRU operates effectively and its leadership was recognized as an integral component to this effectiveness.

Since it was established, 48 research projects have been initiated at the PHRU; eight are currently active and 29 have been completed or are in final stages of analysis and write-ups. Since the PHRU was established, family medicine publications have increased substantially, to an average of 22 per year, compared to an average of 10 per year preceding PHRU. Dr. Godwin said it is particularly significant that the PHRU has attracted an ongoing level of grants from the Canadian Institutes of Health Research, including multiple pragmatic randomized trials, the Newfoundland and Labrador Primary Healthcare Research and Integration to Improve Health System Efficiency (PRIIME) Network led by Dr. Aubrey-Bassler, and a significant component of a Canada-wide project titled Living with HIV, led local by Dr. Shabnam Asghari. The evaluation of the Program of Enhanced Rural and Remote Training (PERRT) program in family medicine, funded by Health Canada, has also contributed significant funds to the PHRU in recent years.

For further information on the PHRU and its work, visit www.med.mun.ca/phru/home.aspx.
Dr. Shakti Chandra, an associate professor of anatomy, is well known as a dedicated teacher. In 2013 she received an Excellence in Teaching Award from Memorial University’s Student Union. The award recognizes outstanding dedication to students and to the pursuit of teaching on campus.

“I think that the most important part of teaching is to help students learn,” said Dr. Chandra. “You can teach all you want, but what really counts is helping the students learn – whether it’s making it easier for them to see things or helping them understand by relating it to simple examples.”

Since 1974 Dr. Chandra has taught anatomy to medical students and residents doing electives. Through the Anatomy Outreach Program she has taken anatomy to the general public showing people what they’re made of and encouraging them to look after themselves better, emphasizing that the most amazing thing in the world is the human body.

Dr. Chandra has spent two sabbaticals dissecting, documenting and plastinating specimens for the Faculty of Medicine’s teaching program. Through her recent work at Dr. von Hagen’s Plastinarium in Guben, Germany, she has brought to Memorial plastinated specimens including whole bodies.

Dr. Chandra has created numerous videos on anatomy, available at www.youtube.com/MUNMedicine/.

Photo at top: The dead teach the living in Dr. Shakti Chandra’s Body Works exhibit, put off in 2016 for the third time.
Dr. Gary Paterno has a lot of fun teaching, and the medical students in his embryology class appreciate his style so much that they successfully nominated him for the 2014 MUN Student Union Excellence in Teaching Award and Outstanding Contribution to Student Life.

The nomination came from the medical student classes of 2016 and 2017. “To be put forward by your students is a very big deal for me,” said Dr. Paterno, who loves to use props during his lectures, such as a sword he uses as a pointer and to slice-and-dice preserved specimens.

Dr. Paterno said he still gets emails from former students who have been in practice for 15 years who send him information on cases they have been involved in and say “hey Dr. P, this would be really cool to talk about in embryology class,” or “you know that crazy left-sided colon you talked about 10 years ago – well I finally saw a case and thought of your class!”

“It’s this kind of feedback that gives me the most satisfaction,” said Dr. Paterno.

Dr. Jim Connor, John Clinch Professor of Medical Humanities and History of Medicine, received the President’s Award for Outstanding Teaching in 2012.

Dr. Connor pursues authentic learning experiences that are truly interdisciplinary. His experience in medical school informs his history classes, making them realistic. His historical background adds depth, context and intellectual meaning to medical education. He encourages medical students to participate annually in the University of Calgary’s History of Medicine Days.

As an instructor in medicine and a historically-oriented humanities scholar, Dr. Connor empowers his students to be critical thinkers and active learners, and to acquire essential skills for physicians in their roles as medical expert, communicator, scholar and professional. He is particularly interested in the interactions between society and the delivery of health care in the 19th and 20th centuries. As a teacher of medical students he is committed to the ideal of having future physicians reflect on their role in society during their training.

Since he was appointed to the Faculty of Medicine in 2004, Dr. Connor has organized the annual Dr. Nigel Rusted Lectureship in Medical Humanities. Dr. Rusted died March 18, 2012, at the age of 104. His passion for the medical humanities prompted him to launch the Dr. Nigel Rusted Lectureship in Medical Humanities in 2003.
Dr. Andrew Furey (Class of 2001), received Memorial’s 2012 Alumnus of the Year award. An orthopedic surgeon and assistant professor of surgery, he is co-founder and president of Team Broken Earth, a volunteer task force supporting the relief effort in Haiti. Under Dr. Furey’s leadership, Team Broken Earth has completed numerous successful missions to Haiti, providing care for more than 500 patients per week.

Dr. Furey’s heroic volunteer work in Haiti took place in the aftermath of the catastrophic earthquake in 2010 that leveled the capital city of Port-au-Prince, killing 200,000 people and leaving more than a million people homeless. His first medical mission was in June 2010 through the University of Maryland, where he had spent a fellowship year. On his return, Dr. Furey founded Team Broken Earth, a volunteer team of physicians, nurses and physiotherapists.

“When we first travelled to Haiti the challenges were immense,” said Dr. Furey. “There was an incredible amount of downed infrastructure, and we were working with people we didn’t know and in very tight quarters. I was truly pushing myself to my personal and professional limits. Fortunately there was an amazing team atmosphere, which was important to ensure everyone got to know each other, and learn from each other, moving toward the ultimate goal of providing care for patients.”
Dr. Dawn House (Class of 1978) was awarded an honorary degree from Memorial in 2010 in recognition of her service to medicine and to Africa.

Following her medical training, Dr. Howse practiced in Woody Point and Corner Brook before making a momentous decision to become a Salvation Army officer and put her medical abilities to use in Africa. She specialized in tropical medicine at the Liverpool School of Tropical Medicine, England, and went to Howard Hospital in northern Zimbabwe in 1988.

In 1992 Dr. Howse moved to Tshelanyemba, near the border with Botswana, to a hospital that had been upgraded from a nursing station. While there serving the 45,000 people in the region, she was the only medical doctor in the 105-bed hospital, supported by a staff of 25 nurses. In that role, she managed the care of an average of 50 in-patients daily, and was consulted on management of an average of 25 out-patients daily. The hospital saw some 350 new tuberculosis patients a year, as well as men and women diagnosed with HIV/AIDS. In addition, she was consulted by the region’s midwives, doing about 40 ultrasounds per month, and performed about 20 surgical procedures per month.

She returned to this province after 20 years of service to Zimbabwe and since then has practiced medicine in Newfoundland.

Dr. Nick Withers (Class of 1996), received Memorial’s Alumni Horizon Award in 2006 when he was a major in the Canadian Armed Forces, in recognition of his lead role in national emergency response efforts to bring injured Canadian soldiers home safely from Afghanistan. The Horizon Award recognizes outstanding achievement among Memorial University’s young alumni.

Now retired, Lieutenant-Colonel Withers proudly wore the uniform for 22 years, providing occupational and emergency medicine support in remote and austere locations. Recruited into the Canadian military while a medical student at Memorial, he soon caught the attention of his employer because of his abilities as an excellent physician and a skilled administrator. Early in his military career he was stationed as head of medical staff in Goose Bay, Labrador, and subsequently re-assigned as physician to a counter-terrorist unit. In 2005 he was posted to the Landstuhl Regional Medical Centre on the Dutch/German border where he was physician to 750 Canadians and facilitated care for another 850 Canadians posted in 22 European locations.

Dr. Withers had the unique experience of supporting several high profile delegations including two Canadian Prime Ministers and her Majesty Queen Elizabeth II on her Royal Tour of Canada in 2010.

Dr. Bruce Aylward (class of 1985) was the first winner of the Memorial University Alumni Award for Outstanding Professional Achievement in 2002; in 2004 he was awarded an honorary degree. These honours were in recognition of his work as co-ordinator of the Global Polio Eradication Program of the World Health Organization (WHO), which has been vital in virtually eliminating polio from the planet.

Since 1998, Dr. Aylward has overseen and managed the Global Polio Eradication Initiative, during which time the program expanded to operate in every country of the world, the annual global budget increased to $700 million a year, polio-funded staff deployed by WHO grew to over 3,500 people worldwide, and new monovalent oral poliovirus vaccines were developed for the program. In 2014, only three countries remained polio-endemic countries.

Since 2011, Dr. Aylward has also led WHO’s work in preparedness, readiness and response to health emergencies. By developing global strategies, analyzing health trends and advising on policies and country collaboration, WHO helps make sure that outbreaks, like the 2014 Ebola epidemic, stay under control.

Since August 2014, Dr. Aylward has served as the special representative for Ebola Response and he is currently the executive director ad interim of WHO’s Outbreaks and Health Emergencies Cluster.
Since 2004 the Faculty of Medicine has seen the passing of many of the founders and builders of the medical school, including the first three deans and many of the earliest faculty members.

DR. IAN RUSTED, the founding dean of the Faculty of Medicine, died July 14, 2007, age 86. Born in Upper Island Cove, Newfoundland, he attended high school in Carbonear and St. John’s, and he continued at Memorial University College for a pre-medical diploma from 1938–40, followed by a BA from Trinity College, University of Toronto, in 1943. He then did a medical degree and rotating internship at Dalhousie University in 1948, followed by a M.Sc. from McGill University in 1949. After postgraduate experience at the Mayo Foundation, he chose to return to what had now become the province of Newfoundland and Labrador.

Recognition of his many activities included four honorary degrees and being made an Officer of the Order of Canada and a Master of the American College of Physicians. On May 2, 2013, he was inducted into the Canadian Medical Hall of Fame in recognition of establishing Newfoundland and Labrador’s only medical school.

What makes this singular accomplishment so remarkable is the vision and perseverance it took to establish a medical school in a poor, underserved province at a time when all of Canada’s medical schools were located in large, resource-rich cities. A video produced by the Canadian Medical Hall of Fame can be viewed here (bit.ly/rustedvideo).

DR. ALBERT R. COX, who served as the second dean of medicine at Memorial for 13 years, died Oct. 14, 2015, age 87.

Born in Victoria, B.C., in 1950 he entered the first class of medical studies at the newly-opened Faculty of Medicine at the University of British Columbia in Vancouver. It was there he met his wife, Dr. Margaret Cox, who was also in the first class of medical studies, and where he earned his MD in 1954. He subsequently specialized in cardiology and in 1969 he was invited to be professor of medicine at the newly-established Faculty of Medicine at Memorial University.

While at Memorial, Dr. Cox held a number of positions, including: associate dean for clinical affairs from 1972-1974; dean of medicine from 1974-1987; vice-president academic (acting) from 1988-1990; and vice-president academic from 1990-1992.

During his tenure as dean of medicine, Dr. Cox saw many changes and developments in the Faculty of Medicine. In 1974, it was under his leadership that the first incarnation of MUNMED was developed and distributed, starting as an Information Memorandum which was circulated to all faculty and staff.
DR. DAVID HAWKINS, the third dean of medicine at Memorial, died Feb. 12, 2011, age 74. Born in St. John’s in 1937, he received his medical degree from Dalhousie University and did postgraduate training at Dalhousie and McGill Universities followed by three years at Scripps Research Foundation in La Jolla, California. In 1968 he returned to McGill as a Medical Research Council of Canada Scholar and subsequently became professor of medicine and director of rheumatology at the Montreal General Hospital.

In 1980 he returned to St. John’s as chair of the Discipline of Medicine at Memorial and in 1987 became dean, following Dr. Al Cox. He led the faculty from 1987 to 1995 and was responsible for cultivating Memorial’s medical graduates by encouraging them to take additional training at other universities and then return to Memorial. He worked hard at increasing the pool of applicants from rural areas by founding MedQuest; he was also responsible for having a faculty newsletter developed and since 1989 MUNMED has been published regularly.

THE HON. DR. ARTHUR MAXWELL (MAX) HOUSE, former Lieutenant Governor of Newfoundland and Labrador and telemedicine leader, passed away Oct. 17, 2013, age 87.

Dr. House is known all around the world as the father of telemedicine; he was also one of the key founding fathers of the medical school at Memorial. Born in Glovertown in 1926, Max House attended Memorial University College (1944-1947) and then Dalhousie University Medical School where he graduated with his MD. After practicing for a few years, he completed his training in 1959 at the Montreal Neurological Institute, McGill University. He practiced neurology in St. John’s for almost four decades (1960-1997).

In 1975, Dr. House started the telemedicine program at Memorial and became a leader in the development of telemedicine internationally. He retired as a full-time faculty member in 1993 but remained with the university until 1997 as a consultant and advisor while continuing his work in telemedicine.

In February 1997, Dr. House was appointed as Newfoundland and Labrador’s 10th Lieutenant Governor and served in this role until 2002. After retiring from this position, he returned to Memorial as Honorary Research Professor. During his career, Dr. House received numerous awards and recognitions, including being named to the Order of Canada in 1989, and promoted to an Officer of the Order of Canada in 2005. He was invested into the Order of Newfoundland and Labrador in 2005, and appointed Honorary Member of the Canadian Medical Association in 2006.

DR. JOHN TOMLINSON died April 7, 2010. Born in England, he began his medical studies at Cambridge University and clinical training at St. Bartholomew’s Hospital Medical School. Recruited to the new medical school at Memorial in 1970, he was the first professor of anatomy. The medical undergraduate curriculum planned at Memorial was significantly different from the traditional programs taught in most medical schools in the English-speaking world. The only prerequisites students required were courses in chemistry and English, so some students had limited backgrounds in biology or physics.

Anatomy teaching was planned as an intensive six-week program in the mornings which took place at the beginning of the second year of studies. Dr. “Tommy” Tomlinson was responsible for designing and contributing to the anatomy program. In recognition of his outstanding teaching he was one of the first faculty members to receive The Silver Orator Award from the students, and also received the Order of the Killick in 1978.

DR. KENNETH ROBERTS, the first associate dean of medicine at Memorial, died in the United Kingdom on Dec. 17, 2012. In 1968 he was appointed the first associate dean of medicine and professor of physiology, and in 1975 he resigned this position to devote himself to full-time teaching and research as professor of physiology. He became the first John Clinch Professor of History of Medicine in 1978. He was known as a Renaissance man who knew science, literature and art. He co-authored a major work with Dr. John Tomlinson titled The Fabric of the Body: European Traditions of Anatomical Illustrations.
DR. WILLIAM HEXT MARSHALL died in St. John’s on Sept. 19, 2013, at age 80. Dr. Marshall was recruited to the Faculty of Medicine in 1968; he was appointed director of postgraduate medical education and later became the first secretary of the Curriculum Committee.

As the first associate professor of immunology, the task of establishing research facilities fell to Dr. Marshall. Under his direction a clinical immunology diagnostic laboratory was established and he became its director.

Over his career, Dr. Marshall received many research grants and supervised one of the first large immunology studies, the West Coast Health Survey. He later founded Terra Nova Biotechnology Ltd., a private company set up to commercialize medical test technology developed at Memorial.

DR. JOHN REGINALD MARTIN died on April 29, 2013, in Ottawa, at age 91. Dr. Martin joined the new medical school in 1971, following a career in Montreal where he served as director of the Arthritis Clinic at the Montreal General Hospital. He was the first rheumatologist to practice in Newfoundland and Labrador. Later in his career, he developed interests in occupational health and held a variety of leadership positions including director of Northern Medicine and Health Program and provincial chief occupational medical officer. He was the author of two books, Leonard Albert Miller – Public Servant (1998) and The Fluorspar Mines of Newfoundland – Their History and the Epidemic of Radiation Lung Cancer (2012) as well as numerous scholarly articles, publications and studies.

DR. NIGEL RUSTED, Memorial’s oldest alumnus and a member of the inaugural class of Memorial University College in 1925, died March 18, 2012, at the age of 104. While training at Dalhousie Medical School he served as health officer for two summers aboard the S.S. Kyle, which visited more than 50 communities along the Labrador coast. He spent time in the 1930s as a medical officer in the S.S. Kyle travelling throughout coastal Labrador and on the MV Lady Anderson along Newfoundland’s southwest coast.

He opened a private practice clinic in St. John’s in 1936 and went on to perform 9,000 operations before retiring from surgery in 1982. He was appointed clinical professor of surgery at Memorial in 1968. After he retired he continued to contribute to the medical school by founding and supporting two annual lectures – the Dr. Nigel Rusted Lecture in the Medical Humanities and the Dr. Nigel Rusted Lecture on the History of Surgery. He received an honorary degree from Memorial in 1973 and an honorary life membership in the NL Medical Association in 2010.

DR. PAYTON died April 19, 2014 at age 84. One of the original faculty members in the new medical school at Memorial, he joined the faculty in 1969 as associate professor of physiology and was promoted in 1977 to professor of physiology until his retirement in 1995. He published several textbooks and monographs and contributed numerous articles to scientific journals, proceedings and newsletters.

Dr. Payton’s research interests were in the field of synaptic and membrane physiology and pharmacology. In 1973 Dr. Payton became director of Medical Audiovisual Service (MAVS). Over a period of almost three decades, MAVS created many videocassettes for the Faculty of Medicine and made them available as teaching aids, public awareness tools and medical learning resources for students, staff and faculty.

DR. ROBERT MOWBRAY died Feb 25, 2009. He was a graduate of Glasgow University; following an academic career at Manchester, Glasgow and Melbourne Universities, he joined Memorial’s new medical school in as a professor of clinical psychology. He played important roles including his position as associate dean of what was then the Discipline of Community Medicine. He was also a long-time chairman of the Students Admission Committee, and a deputy university orator.

DR. JULIUS (“JOHN”) HOENIG, former professor and chair of the Discipline of Psychiatry at Memorial, died Feb 19, 2009. Born in April 1913 in Czechoslovakia to a Jewish family, he began his medical training in Prague, fleeing to England during his final year as Hitler’s army marched into Czechoslovakia. He joined the refugee community in Glasgow, Scotland, and completed his medical education there. After graduating, Dr. Hoenig joined the British Army Medical Corps and spent time in India, Burma and Singapore. As an ex-serviceman, he took a year of training in neurology and then completed
psychiatric training at the Institute of Psychiatry in London.

In 1968, Dr. Hoenig was offered the position of professor and chair of the Discipline of Psychiatry at Memorial, helping to develop the new medical school. He remained in this position until his retirement in 1980.

In March 2012 a ceremony was held to dedicate the Geriatric Psychiatry Day Hospital at the L.A. Miller Centre to him. He had developed the Geriatric Psychiatry Day Hospital into a team of experienced geriatric psychiatrists, allied health professions, nurses and advanced practical nurses, who provide ongoing therapeutic support to elderly patients with mental health problems.

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LEADERSHIP

DEAN OF MEDICINE

Dr. James Rourke
2004–2016

VICE-DEAN OF MEDICINE

Dr. Sharon Peters
1999–2014
Dr. Cathy Vardy
2014–present

ASSOCIATE DEAN OF MEDICINE

Dr. Patrick Parfrey
2005–2011
Dr. Proton Rahman
2011–present

ASSOCIATE DEAN OF UNDERGRADUATE MEDICAL EDUCATION

Dr. Don McKay
2011–present

ASSOCIATE DEAN OF CLINICAL RESEARCH

Dr. Karen Mearow
2003–2014
Dr. Gary Paterno
2015–present

ASSOCIATE DEAN FOR RESEARCH AND GRADUATE STUDIES

Dr. Reza Tabrizchi
2012–present

ASSOCIATE DEAN OF BIOMEDICAL SCIENCES

Dr. Reza Tabrizchi
2012–present

ASSOCIATE DEAN OF COMMUNITY HEALTH AND HUMANITIES

Dr. Michael Murray
2001–2004
Dr. J.T.H. Connor
2005–2007
Dr. Catherine Donovan
2007–2008
Dr. Shree Mulay
2008–present

ASSOCIATE DEAN OF EDUCATIONAL DEVELOPMENT

Dr. Vernon Curran
2015–present
## CLINICAL DISCIPLINES

### DISCIPLINE OF ANESTHESIA
- Dr. Frank King 1994–2005
- Dr. Ken LeDez 2005–2009
- Dr. John Jamieson 2009–2010
- Dr. Jeremy Pridham 2010–present

### DISCIPLINE OF FAMILY MEDICINE
- Dr. Bob Miller 2001–2011
- Dr. Cathy MacLean 2013–2015
- Dr. Marshall Godwin (acting) 2016–present

### DISCIPLINE OF GENETICS
- Dr. Ban Younghusband 1999–2009
- Dr. Bridget Fernandez 2010–present

### DISCIPLINE OF LABORATORY MEDICINE
- Dr. Dzintra Fernandez 2004–2006
- Dr. Simon Avis 2006–present

### DISCIPLINE OF MEDICINE
- Dr. Anne Sclater 2003–2009
- Dr. Wayne Gulliver 2009–2014
- Dr. Alan Goodridge (acting) 2014–2015
- Dr. Ross Feldman 2015–present

### VICE-CHAIR OF MEDICINE
- Dr. Alan Goodridge 2010–present
MEMORIAL UNIVERSITY’S undergraduate medical students are devoted, hard-working and compassionate to say the least. Every year they plan, organize and carry out the Monte Carlo Charity Gala, choosing specific charities to receive the funds that are donated through the tremendous event and its affiliated facets.

The Monte Carlo Gala began in 1977 to raise money for medical student Conor Maguire, who sustained a spinal cord injury in a diving accident that left him quadriplegic. Today Dr. Maguire is back at Memorial as the clinical chair of the Discipline of Radiology.

Since that first Monte Carlo fundraiser in 1977, the event has evolved into a major annual charity fundraiser that involves the community at large and raises funds for many deserving local charities. Different charities are selected each year, and the funds are raised through donations, casino-style games, live and silent auctions, and much more. Since 1977 well over one million dollars has been raised for charities through Monte Carlo.

“True to the spirit of its conception, Monte Carlo is the result of the passion, care, and dedication of Memorial University’s medical students,” said Dr. James Rourke, dean of medicine. “It is an opportunity for all involved to contribute and further make a difference in the province.”

The Monte Carlo Charity Gala has grown in breadth and in depth since its inauguration. It is now much more than an evening of glitz, dancing and stylish outfits. It involves many hours of volunteering and fundraising by the students, who go the extra mile in various ways, including organizing bake sales, garnering auction items, and co-ordinating entertainment for the gala. Each student plays a vital role in the production of Monte Carlo, and without their dedication, the event wouldn’t be successful year after year.
TO CELEBRATE the connection between the Faculty of Medicine and Newfoundland and Labrador, and the opening of the Medical Education Centre, a piece of artwork called Crafting a Legacy was commissioned by Dr. James Rourke, dean of medicine and his wife Dr. Leslie Rourke.

Crafting a Legacy could be called a “clay quilt,” with artistic contributions from past and present students, faculty and staff of the Faculty of Medicine and two local professional artists, all under the instruction of celebrated mural artist and art educator Lynda Faulks.

“The Faculty of Medicine, from its beginning, has emphasized working together,” said Dr. Rourke. “Therefore, it was important to us that this project could involve many who have been connected in different ways to the faculty.”

Dean Rourke himself created a tile for the mural, titled Grenfell Legacy, about the contributions Sir Wilfred Grenfell made to medicine in Newfoundland and Labrador.

The clay mural is located in the atrium of the Medical Education Centre. To complement the mural, a commemorative book was produced, which contains a summary of the timeline of the creation of the mural, how the idea came to be, why it was created and the purpose. Written in the words of each artist, it gives the reader an in-depth explanation of each panel and its significance and why they chose to participate in the project. The book is available for viewing at http://bit.ly/CraftingALegacy.