BREAKTHROUGH FOR 40 YEAR STUDY ON EYE DISEASE
MESSAGE FROM THE DEAN

The year 2017 marked our 50th anniversary as we celebrated half a century of transforming health care for the people of Newfoundland and Labrador and beyond. Thank you to everyone who was able to participate in anniversary celebrations, including alumni who held their own celebrations across the country. I would like to also extend my thanks to our celebration committee which was chaired by Drs. Reza Tabrizchi and Cathy Vardy and supported administratively by Ms. Joan Fillier.

I am delighted to tell you that in December, we celebrated the Faculty of Medicine’s Building a Healthy Tomorrow Campaign which surpassed its $5 million goal. Thanks to this campaign, our learners, faculty and researchers will have access to the tools and support they need to be the best they can be. The success of this campaign will help us with our vision to improve the health of the people and communities we serve through excellence, integrated education, research and social accountability. I would like to extend my sincere thanks to our many donors for their support and I also wish to thank our volunteer campaign cabinet which was co-chaired by Dr. Peter Collingwood and Mr. John O’Dea.

Health-related research in our faculty has experienced exceptional growth over the last year including a new partnership with Janssen Inc. that will help translate research into patient management strategies. We have also witnessed novel discoveries that could lead to new treatment for hepatitis C; found genetic discoveries in conditions that lead to blindness in some Newfoundland families; and conducted studies relevant to improving the health of Indigenous populations.

Finally, over the past 12 months, we have also gone on a journey of strategic discovery to help shape the future of our medical school. Through this process, we have reached out and engaged over 500 people, including learners, faculty, staff, community members and partners. We have listened, collaborated, reflected and learned. Our new strategic plan, Destination Excellence, signifies our pledge to aim higher and achieve excellence in all we do. It also signals our commitment to integrating education, research and social accountability as well as uniting the diverse talents of our learners, faculty and staff to accelerate the Faculty of Medicine’s collective impact on the communities we serve.

The plan recognizes the need for innovation and change and motivates us to think, prepare and act in new and different ways with a shared vision: Through excellence, we will integrate education, research and social accountability to advance the health of the people and communities we serve.

Whether you are a learner, faculty, staff, alumni, donor or a friend of the Faculty of Medicine, we have many opportunities on the horizon and I look forward to working with you and sharing success with you in the coming year.

Sincerely yours,

Margaret Steele,
HBSc, MD, FRCP(C), MEd, DFCPA, CCPE
In 1983, a 28 year old man from rural Newfoundland made an appointment with an ophthalmologist. He had significant vision loss. Two years later, he could only see hand movements. The eye doctor recognized the features of a hereditary eye condition called Retinitis Pigmentosa (RP) and so began a genetics study that would last for decades; a study that has just had a major breakthrough.

The man was referred to an ocular genetics clinic run by Jane Green (now Dr. Jane Green), a geneticist with the Faculty of Medicine and Dr. Gordon Johnson, ophthalmologist. The family has been plagued by RP, an eye disease that starts young and affects a person’s whole life. Another family member first experienced a decrease in vision at age seven and by age 12 was enrolled in the Halifax School for the Blind.

Then, in 1986, a 14 year old patient from the same area was seen because his younger brother was experiencing symptoms. The following year the older boy was night blind and had to stop playing hockey due to deteriorating vision. He left school by grade 12 and subsequently lost all vision before he was 40. Most of these family members were blind by their 20th or 30th year.

Daniel Evans, a medical student in the joint MD-PhD program in the Discipline of Genetics, who worked on the molecular genetics aspects of the RP study, noted that these are typical stories from families affected by the disease. Evans, who worked with his supervisor Dr. Michael Woods, met several of the family members during one of his rural rotations.

“Theyir mother described the moment she realized that they had been night blind from an early age,” described Mr. Evans, when referring to the 14 year old and his brother. “She recalled how during the night, they would guide themselves along the walls to get around. Of course, they themselves didn’t realize this was unusual, as they had grown up with these visual changes (night blindness and decreased dark adaptation). By age 30, both brothers had low vision, which was reduced to the ability to count fingers. When I met the older brother, now in his 40s, he had almost no vision, and was sensitive to the light.”

“Typically, RP causes severe visual impairment and/or legal blindness by the age of 50,” he added. “We saw a much faster progression of RP in this family.”

Through the study, the researchers were able to show the genetic cause of disease in this family is a large deletion in a gene called MERTK. Mutations of the MERTK gene explain about 1 per cent of cases of autosomal recessive RP (arRP), the pattern of inheritance where you receive two copies of the mutation, one from each parent.

The MERTK deletion in this family has never been reported before now and the finding could help provide a genetic diagnosis for other unsolved RP families. Knowing the gene and mutation could also be helpful in treatments if a MERTK-RP treatment becomes available in the future.

“While working on this project as an MD and PhD student, I had the unique opportunity to integrate laboratory, or bench science, with real world clinical experience,” said Mr. Evans. “While most of my research time is spent in the lab working with DNA samples, I was able to visit this family during my first rural rotation, where I could ask questions and hear their personal stories.”

“It’s one of the main reasons I enjoy genetics actually. It’s really rewarding when you can see the positive impact the research has on patients and families.”

Among seniors, epilepsy is one of the most common neurological disorders, after dementia and stroke. In fact, every day in Canada, an average of 38 people are diagnosed with the condition.

Earlier this year, Dr. Matthew Parsons’ lab received a donation from Epilepsy NL through the Medical Research Fund (MRF) to study the causes of epilepsy. They’re hoping the research will not only give them more insight, but lead to new treatments.

When an individual experiences their first seizure, perhaps due to an infection, a blow to the head or a rare genetic mutation, the probability of experiencing a second seizure increases. If they have a second seizure, the probability of subsequent seizures increases even more.

Epilepsy is a susceptibility to recurrent, unprovoked seizures.

It’s widely thought that a variety of plastic changes occur in the brain after the initial seizure. “The basic idea is that experiencing a single seizure increases the chances of a second occurring which, in turn, increases the chances of a third occurring. So, each seizure seems to lower the threshold of a subsequent seizure,” explained Dr. Parsons. “This means that the first seizure must induce some long-lasting change in the brain that makes it more excitable.”

Dr. Parsons’ team is using an experimental model of epilepsy in isolated brain tissue to understand the long-lasting changes that a single seizure has on the brain. They’re interested in the neurotransmitter glutamate, the brain’s most common excitatory neurotransmitter which may increase after a single seizure.

Dr. Parsons and his team hope to better understand the neurobiology of epilepsy as well identify potential therapeutic targets for treatment because, as he points out, of the estimated 65 million people worldwide who have it, many of them don’t respond to the medications that are available.

Dr. Parsons’ main research focus is on the role of glutamate in neurodegenerative diseases. “This funding opportunity has genuinely peaked my interest, and that of my new student, in studying the glutamate system in the context of epilepsy. I believe that the $25,000 put towards this project will have a lasting impact long after the termination of this particular project, as I am now eager to continue to use epilepsy as a disease model in my lab throughout my career.”

#MUNMedDonorPride

Dr. Colin White from Torbay is a plastic surgeon living in Vancouver, BC. Mission work has always been of interest to Dr. White and he’s made several trips to offer his skills internationally. All of the trips have been memorable; some more so than others like helping ‘thrown away’ children in India who were orphaned by their parents because of a cleft lip or victims of spousal abuse acid attacks in India.

Here’s Dr. White’s reflection on an experience after a recent mission to India.

INTERNATIONAL SURGICAL MISSION WORK: CRITICISMS VERSUS REALITIES

BY COLIN P. WHITE (MD ’07)

“What a drain on the Canadian tax payer,” I was told by another plastic surgeon after I completed a surgical mission to India during the fall of 2016. ‘There are millions of people in Canada who need care and your team goes to India,’ was his follow up statement.

This wasn’t the first time I have heard negative comments about surgical missions doing work in developing nations. I’ve been involved in four international missions in my life and each time I’ve received criticism as to why these missions are a poor use of Canadian resources.

I am part of Operation Rainbow Canada (ORC), a 100 per cent volunteer, non-profit organization based out of Vancouver. The group started in 1998 and has gone all over the world on surgical missions. A plastic surgery group, focusing on cleft lip and palate surgery and burn reconstruction, ORC has served thousands of underprivileged patients (mostly children) on over 25 missions. On our recent mission to Hansot, India we did over 80 surgeries and treated over 60 patients.

Personally, I find these missions incredibly rewarding. Patients get the obvious benefit of free surgery that they wouldn’t normally be able to receive. The benefits to the surgeon/team are numerous. We get to do high volume of cases in short period of time. There is unique and rare pathology seen in these countries and the team gets to apply their skills to patients in need.

Epilpse Newfoundland and Labrador is a registered charity founded in 1983. It is the only epilepsy organization serving the province and representing more than 10,000 men, women, children, and their families, who are living with epilepsy. The association is funded by donations, 100 per cent of which remain in the province to help develop programs and services dedicated to the promotion of independence and quality of life for all people with epilepsy and their families.

EPILEPSY NL

The Medical Research Fund was established by Memorial University of Newfoundland to assist the Faculty of Medicine in achieving excellence in its programs of health research as part of its mission to help meet the needs of the Province and its people.

ALUMNI PROFILE

COLIN WHITE

Dr. Colin White with a patient during Operation Rainbow Canada’s mission to India in November 2016.
When looking at health care systems and delivery there are always patients in need. Whether it is in rural India or central Newfoundland, people need care. Some people say, that if you take health care providers out of Canada, then Canadian patients are not getting care. This is simple supply and demand. The demand is endless and the supply of health care delivery remains limited. However, the reality is that participation in these missions represents very minimal period of interruption from a surgeon’s regular Canadian practice.

In addition to the criticism of taking time and resources away from our home country, people say that there is an element of doctors “practicing” on patients; that there is no long term follow-up; and that these missions do not address the underlying system. However, the reality is that physicians on surgical missions hold themselves to the same high ethical standard that they would conduct themselves when working in Canada. Proper planning is necessary and adequate follow-up for patients must be well thought out and arranged. As a professional, the team must work with existing local infrastructure to ensure that patients are cared for. In many cases, the mission has laid important ground work for local development. For example, in 2015 ORC went to Hansot for the first time. Because of the group’s visit and the commitment to returning for subsequent missions the hospital upgraded its operating room supplies. Since then, because the operating rooms now had sufficient resources, a local plastic surgeon from one of the nearby centres started doing surgery once a month.

Another example of this is the relationship that ORC developed with a hospital in Vietnam. The team started going there in 2006 and has gone back every two years. During this time the local surgeons, while working in conjunction with ORC, have been able to start a plastic surgery training program where local surgeons will be trained to serve their own patients with plastic and reconstructive surgery procedures.

The last criticism I’ve heard again and again is that plastic surgeons only do reconstructive surgery procedures. This fundamentally questions the volunteer’s motives. The reality is, that the harshest critics are always those who have never done any mission work. Anyone who volunteers on missions quickly realizes that if you don’t provide care to these patients in need - no one will.

In closing, the patients helped on these missions need care, as a health care professional you have skills that can help. Missions are rewarding and worthwhile. If you have an interest in this sort of work get involved, you will make an incredible difference in the lives of these patients.

Canadians have always valued helping those most in need no matter where they live and this is a true value that people must remember when thinking about international medical missions.

A CONVERSATION WITH DR. WHITE

Did your time at Memorial influence your drive to do international mission work?

I was interested in international mission work prior to medical school. During my undergrad at Memorial I went on a development mission to Mexico working with a rural farmer’s cooperative building water irrigation systems. I found this experience deeply rewarding and I have been interested in this type of work ever since.

Can you tell me more about your time at Memorial’s Faculty of Medicine?

I enjoyed medical school immensely and after training at multiple different academic hospitals across the country I firmly believe that MUN med school is certainly a leader with regards to clinical exposure for students.

Some of the best memories I have from medical school remain working in the hospitals in NL and having a profound sense of pride that I was providing service and help to the people of my home province. I remember the thrill of consolidating the knowledge gained during pre-clerkship with actual disease process and patients seen during clerkship. I also remember doing my surgery rotation and enjoying the regularity and routine of the OR. The first time I saw Dr. Dave Jawer repair a cleft lip, I thought it was pretty amazing. I was hooked right then and there.

What is your most memorable international experience and why?

When in China in 2010 we operated on several children that were “thrown away” by their parents because they were born with a cleft lip. Because of the Chinese one child per family policy, parents had a low tolerance for an imperfect child. We saw several children who were brought in by their adoptive parents, who said they simply found these patients while they were infants on the side of the road. This was quite eye opening to see that there was such little regard for human life and that this was quite different from the way we view potentially fixable conditions here in Canada.

The other patients that are memorable are the victims of acid attacks in India. These patients, generally women, had terrible facial and neck burns secondary to acid being thrown in their face. This was typically the result of personal or family disputes generally involving arranged marriages or interactions of different castes. This was quite disturbing compared to living in a country where such violence is not accepted or tolerated.

What do you think about the criticism that missions such as this are taking away business from local doctors?

I firmly believe that if patients need care they should receive it. Generally the places where we go, there is always a need and a surplus of patients who need care and thus we really don’t interfere with local dynamics that much. However, the politics and local resource dynamics must be carefully navigated in order to provide long term and resource building for the local populations. That is why I am committed to being involved with ORC. The building and maintaining of local supports is something that our group recognizes and tries to foster.
DEPROGRAMMING LIVER DISEASE

The hepatitis C virus kills 1.34 million people a year. That’s as many as HIV/AIDS, tuberculosis or malaria. It’s estimated 185 million people are infected globally.

A recent PhD graduate from the Faculty of Medicine, Dr. Hassan Kofahi, made a novel discovery that could lead to new treatment for the hepatitis C virus (HCV) and its destruction of the liver.

According to Dr. Kofahi’s supervisor, Dr. Rod Russell, while many people are getting treatment that is curing their HCV, it’s very expensive and not accessible to everyone. He also notes, there are many Newfoundlanders who are infected with HCV and don’t know it. Nationally, that average is 80 per cent. If not treated, 80 per cent of those individuals will likely develop a chronic infection, and many of those will progress to fatal liver complications such as fibrosis, cirrhosis or cancer.

How HCV infection leads to liver complications is not fully understood, but virus-induced cell death in the infected liver could play a major role. This means, the cell kills itself to prevent greater harm or to eliminate the virus. There are several forms of programmed cell death. Two of which are apoptosis and pyroptosis.

“This study confirms the ability of HCV to induce apoptosis, that it can also induce pyroptosis, and that both of these forms of programmed cell death take place in uninfected bystander cells in the presence of HCV-infected cells,” explained Dr. Russell.

“Understanding the exact mechanisms by which the virus stimulates these two forms of programmed cell death in infected and bystander cells might provide novel treatments and eventually a comprehensive therapeutic regimen that can both eliminate the virus and prevent progression of HCV-related liver disease in patients,” noted Dr. Kofahi, who, since graduating in May, has returned to Jordan as an assistant professor at the Jordan University of Science and Technology.

Dr. Kofahi notes that given our province’s demographics, the findings are very significant. “Our results are particularly relevant to the people of Newfoundland and Labrador because it has the fastest aging population in Canada. In 2013, the Public Health Agency of Canada reported that there were 106 cases of HCV infection in NL, but typically there are as many undiagnosed cases as diagnosed cases.”

“Sickness from HCV infection usually presents 20-30 years after initial infection, and most undiagnosed cases in NL would have come from the tainted blood supply before HCV screening was possible. This means that many baby boomers are now starting to show symptoms of HCV infection. Understanding how the virus causes liver pathology is a medical research priority, especially for those who can’t afford therapy,” he added.

The research team published their findings in a journal that is part of the Nature Publishing Group journals (www.nature.com/articles/srep37433). The project was supported by research funding from Memorial University, Jordan University of Science and Technology and the Canadian Network on Hepatitis C.

“Our results are particularly relevant to the people of Newfoundland and Labrador because it has the fastest aging population in Canada.”
50 YEARS OF TRANSFORMING HEALTH CARE

In 1967, Premier J. R. Smallwood announced in the House of Assembly that, within a five-year period, the government would provide between $40 and $50 million to establish a health sciences centre, including a Faculty of Medicine, at Memorial University. In 1969, the first group of potential doctors started classes. In 1973, the first 23 medical graduates attended a special convocation on June 16. Since then, the faculty has seen tremendous growth in undergraduate students, post graduate students, graduate students, faculty and staff.

Dr. Adaani Frost (pictured above and right), was in that first graduating class. “Medical school was designed to provide family physicians/generalists to the Newfoundland communities. But having a medical school, I think, elevated the practice of medicine in St. John’s as well as in the province as a whole,” Dr. Frost noted. She remembers the first class as being a very closely knit group that embraced both faculty and students. Dr. Frost, who is now professor of medicine, pulmonary and critical care at the Weill Cornell Medical College, Houston Methodist Hospital and director of the Houston Methodist Lung Center, appreciated the close mentorship of the faculty with the students.

2017 marks half a century of the Faculty of Medicine and a Celebration Committee was formed to plan several events throughout the year, engaging community members, alumni and faculty, staff and learners.

Celebrations included five Speaker’s Series events that ranged from health care sustainability to the faculty’s relationship with Indigenous peoples; an open house for community members as part of Doors Open St. John’s; a mixer for faculty, staff, students and alumni; several dinners and events across the country; monthly themed displays; and a formal gala at the St. John’s Convention Centre. In addition, the faculty produced a commemorative book and bag available online at: https://event-wizard.com/medmemorabilia/0/register/.

Visit the 50th anniversary website to read more
www.med.mun.ca/50/Home.aspx
CONVOCATION 2017

CONGRATULATIONS GRADUATES!

MAY 2017 - Doctor of Medicine

Adil, Areej
Anstey, Reegan Jaye
Ash, Chelsea Danielle
Bacque, Ann Lisa
Barnes, Katelyn Rose
Bartellas, Emilia
Bilinsky, Lauren Louise
Black, Holly Ann
Boswall, Kathleen Margaret Eileen
Bradbury-Squires, David James
Buckley, Alvan David
Byrne, Marcus Clay Cyril
Campbell, Graeme Douglas
Chard, Elliott Frederick
Church, Jesse Storm
Coady, Meaghan Jean
Connors, Stacie Marie
Dedinca, Arbresa
DeLong, Allison Nicole

Dias, Alexander Victor
Dinn, Sarah Ellen
Dolomount, Lindsay Ann
Ducey, Michael Joseph
Dunne, Thomas Robert
Dwyer, Jessica Avril
Eagles, Matthew E.
Ellis, Marshall Walker
Faour, Elizabeth Ann
FitzPatrick, Erin Lorraine
Fitzpatrick, Madeline Nina
Fraser, Christopher Joel
Greene, Helena Ann
Hamilton, Gina Beth
Hamilton, Neil Allan
Harty, Christopher Robert
Hayward, Mark Francis
Hennessey, John Charles
Hewitt, Mark Keith

Hudson, Pamela Lynn
Hughes, Jessica Mariah
Jeddore, John Nicholas
Kehoe, Mitchell Brian Joseph
Lundrigan, David Collier
Major, Jessica Catherine
Marcoux, Curtis Michel
Martin, Hilary Claire
Milton, Kelly Lynn
Morrison, Gillian Lana
Munn, Alexandra Baird
Murphy, Justin Raymond
Nichols, Adam Harry Gerard
Nicholson, Catherine Pamela
Nofalt, Jennifer Christy
Normore, Ryan Colby
O’Connell, Andrew Curtis
Panhar, Richa
Pelley, Emily Elizabeth
Porter, Jonathan Robert
Powell, Maria Frances

Ralph, Victoria Diana
Roche, Kristina Jean
Seidel, Jason Scott
Shea, Whitney Katherine
Skiving, Douglas Graham
Sloan, Michael James
Small, Rebecca Nicole
Sproul, Erin Leigh
States, Alexandra Christina
Stratton, Shane Bradley
Stuckless, Jennifer Maggie
Wadden, Daniel Gerald
Waghmare, Sachin Pradeep
Wareham-Fowler, Stacey Lee
Webster, Rebecca Elizabeth
Whalen, Desmond Rodney
White, Meagan Nicole Mona
Williams, Christopher Edward
Woodford, Elizabeth Kathleen
Woodworth, Claire Flora
Young, Matthew Nicholas

VALEDICTORIAN SPEECH
BY DESMOND WHALEN

June 2, 2017

Dean Steele, Faculty, Family, Friends, and my fellow classmates,

It is a near impossible task for anyone to sum up four of the best years of our lives, and at times days that seemed like the worst. This group has made memories, and forgotten experiences, we have laughed and we have cried, we have studied hard and played hard, but most importantly we did it together. I could not think of a better group to have spent the past four years with, and before I even start this speech I want to thank you for giving me the honour of bidding farewell.

Read more of Dr. Whalen’s speech here.
On Nov. 18 more than 600 people gathered for an enchanted evening. A Night in the Enchanted Forest was the theme for this year’s Monte Carlo event, which raised money for four local charities: the AIDS Committee of Newfoundland and Labrador, Bridges to Hope, Stella’s Circle and the Gathering Place.

2017 marked the 41st Monte Carlo. It was organized by second year medical doctorate students and presented by Diamond Design NL. Guests enjoyed casino-style games, as well as live and silent auctions.

Monte Carlo had surpassed $1,000,000 in total funds raised for charity since it started in 1977. The event was initiated for medical student, Conor Maguire, who after his first year of medical school, sustained a spinal cord injury in a diving accident that left him quadriplegic. The medical class of 1980 organized a fundraiser to purchase a vehicle wheelchair lift so Conor could continue his medical education. Dr. Maguire subsequently completed his medical degree and is now a successful radiologist. He also honored Monte Carlo by serving as its official patron in 2009. https://munmontecarlo.squarespace.com/
“I was raised by wonderful parents who instilled in me a deep sense of compassion towards others. I was taught to follow my heart, work hard, and continually reflect on how I might use my efforts to help others.”

A 2016 recipient of The Charles Tabachnick award from the Canadian Medical Hall of Fame (the second to receive the award in the Faculty of Medicine), Mr. Maher spent the summer of 2016 as a research fellow at the University of California, investigating skin manifestations of hepatitis C and HIV-associated Kaposi sarcoma. He has delved into research in lymphoma, health equity and suicide prevention. He’s also spent time completing clinical rotations in St. John’s, Happy Valley-Goose Bay, Nain, St. Anthony Ottawa, Montreal and Toronto. This fall he completed a four-week rotation at the University of Oxford Medical School.

Currently, Mr. Maher is the student representative on the Canadian Medical Association (CMA) General Council Task Force, having played a leading role in the development of the CMA Ambassador Program. He has served on the national executive of the Canadian Federation of Medical Students, advocating on behalf of medical students in the Atlantic region. In addition, he’s been involved with The Rounds Table, an innovative medical podcast aimed at helping clinicians stay up to date with major new research in medicine.

Mr. Maher’s road is paved with accomplishments and accolades. A fourth year student in the Doctor of Medicine program, he is passionate about health policy and advocacy.

Prior to medical school, Mr. Maher studied common and civil law at McGill University. He also holds a MSc in global governance and diplomacy from the University of Oxford, where he investigated the barriers to global action on non-communicable diseases. He completed his undergraduate studies at the University of Ottawa, graduating summa cum laude with an honours bachelor of social sciences in international studies and modern languages. He is also a former recipient of the Killam Fellowship and the TD Canada Trust Scholarship for Community Leadership.

He began his studies at Memorial in 2014. “When I decided to apply to medical school, I could think of no better place to train than Memorial’s Faculty of Medicine. While I completed my undergraduate and graduate studies outside the province, I was thrilled to get the opportunity to return home and learn from Memorial’s energetic and committed faculty members. The Faculty of Medicine’s focus on social accountability in the delivery of medical education was also very appealing to me.”

White Coat

On Sept. 15, 2017, the Class of 2021 received their white coats at the 16th White Coat Ceremony at the Faculty of Medicine. The white coat has become a symbol of the medical profession and healing life.
OPPORTUNITY OF A LIFETIME
STUDENT CHASES HER GENETIC DREAMS

Alison Sutherland remembers every detail of the day she got the news.

“I got the email on the afternoon of May 3. When big things like this happen, you don’t forget when it happened. I saw the beginning of the email with the subject line Rothermere Fellowship 2017 that read ‘Dear Alison, I am delighted to…’ People are rarely delighted to tell you that you didn’t receive the award,” Ms. Sutherland recalled. “After I saw that my application had been successful, I immediately collapsed out of my chair and on to the floor. After being on the floor for what was hopefully only a few seconds of panting in disbelief, I got myself together enough to grab my phone and go to the stairwell and phone my mom.”

“When she realized it was ‘the big one,’ she started to cry. She asked me ‘So, what does this mean?’ and I replied that it meant that I would be able to continue my education in ways I had only ever dreamed of.”

What Ms. Sutherland dreams about is genetics. As she heads to the University of Cambridge in the United Kingdom to do her PhD, her research could mean more accurate predictions of disease development and drug response for Indigenous Canadians.

Ms. Sutherland completed a bachelor of science (hons) at the University of Guelph in 2012. The day after, she embarked on a two-year solo backpacking trip across 32 countries, completing a full lap of the globe.

In 2015, Ms. Sutherland began her career in research at the Institute of Child Health, University College London as a laboratory assistant. She performed vaccine evaluations on samples from children in developing nations in association with the World Health Organization. That same year, she started her masters in science under the supervision of Drs. Proton Rahman and Darren O’Reilly at the Faculty of Medicine. Since then, she’s worked on investigating genetic markers for treatment response in patients with psoriatic arthritis, a genetic disorder common in Newfoundland and Labrador’s population.

Outside of her masters work, Ms. Sutherland volunteered as a mentor with Let’s Talk Science; she’s led groups of Girl Guides; she taught an art class to a group of Syrian girls “to ensure they are given the same opportunities for extra-curricular activities as their brothers;” and within the genetics community at Memorial, she led a project entitled Tea with Jane, a series of video recordings with Dr. Jane Green – one of the founding members of genetics research in Newfoundland.

“When I ‘grow up’ I would like to be a professor of genetics. This award allows me to shift within the discipline from medical to evolutionary genetics which will help me to gain a better-rounded knowledge base in genetics. Often professors are experts in only one area of their field. I plan to study various aspects of genetics to enable me to adequately teach the subject as a whole,” Ms. Sutherland explained.

She hopes to be part of a project called The Genetic and Immunological Impact of European Contact on Indigenous North Americans, with the goal of better genomic medicine for Indigenous Canadians.

“There are not many times in your life that you can point to and say that that’s when everything changed for me, but May 3 was one of those days. It was the most intense feeling of relief I’ve ever had,” said Ms. Sutherland. “I can hardly express how fortunate I feel to have been given this opportunity of a lifetime.”

Established by Memorial University’s first chancellor, Lord Rothermere, the fellowship is awarded annually by the Rothermere Fellowships Trust to a candidate who will be pursuing their studies for a higher degree at a university of their choice in the United Kingdom and who is committed to Newfoundland and Labrador. The fellowship is currently valued at about £16,500 per year, plus tuition fees, and return airfare to Newfoundland.
A PERFECT MATCH

Falling in Love with the West

When Dr. Julie Warren was in the second year of her doctor of medicine program, she went to the West coast of Newfoundland and she was hooked. “I absolutely fell in love with the area. My first experience was in Port aux Basques during second year,” Dr. Warren noted. “I was so impressed by my preceptors who had such diverse full scope family practices, which was exactly how I saw myself working in the future.” Now in her second year of residency, she’s very happy to be back there.

Since 2015, the Faculty of Medicine has had a family medicine stream system, matching residents with different areas of the province using the Canadian Resident Matching Service (CaRMS). The two-year program means training in urban, rural and remote locations across Newfoundland and Labrador, New Brunswick and Nunavut.

The streams include a rural stream (Eastern, Central and Western) and a Northern stream (Goose Bay and Nunavut). Candidates apply to any or all of the streams in CaRMS and then rank their choices. Residents in the Western stream complete training in Bonne Bay, Corner Brook, Deer Lake, Pasadena, Port aux Basques, St. Anthony and Stephenville.

Since the start of the stream system, 18 residents have matched to the Western stream from British Columbia, Ontario, Nova Scotia and Newfoundland and Labrador and a large number of residents have chosen to work in the region after completing their residency training. Currently there are 13 residents in the Western stream.

Dr. Warren says given the population size and location, there are a lot of opportunities for learners. “Since we are geographically quite far from other referral centres, our hospitals see and manage a wide variety of presentations that other similar sites may just transfer elsewhere. Also, with relatively fewer learners in the area there’s always lots of opportunity for hands on experience, one on one teaching, and extra experiences.”

The lifestyle on the West coast is also important for the Clarke’s Head, NL native. “When it comes to lifestyle you really can’t compare to the West coast. Whether you’re into theatre, sports, hiking, music, boating, the list goes on and on, there’s something for everyone here.”

Dr. Warren is very focused on what her future holds, having graduated from Memorial with a B.Sc. before completing her MD. “Since the beginning of medical school I knew I wanted to be a family doc in a rural and remote area, and my experience here has been exactly what I need to be ready.”

“Next year I’m hoping to work in a rural area where I can work much like the way I do in Port aux Basques. I’d love to have a broad scope family practice that involves office practice, hospitalist, obstetrics, emergency room and critical care,” she says. “It’s also important for me to live in a place that I can be an active part of my community and spend lots of time outside.”
Sophie Bennett has always been very immersed in her culture and although she knew she wanted a career in health, she wasn’t sure exactly which avenue. Then, in 2015, Bennett attended the first Healers of Tomorrow Gathering, a health careers summer camp.

Now, Ms. Bennett, who’s from St. George’s, is studying nursing at the Centre for Nursing Studies. In fact, four of the students who attended that camp are studying nursing. “Before attending the Healers of Tomorrow Gathering, I was not considering a career in nursing. The gathering provided me with a lot of knowledge on the program and along with the hands on experience, and presentations from registered nurses, I realized it was what I truly wanted to pursue,” Ms. Bennett said.

That’s the result Dr. Carolyn Sturge Sparkes, coordinator of the Aboriginal Health Initiative (AHI), is hoping for.

The AHI was awarded $65,000 from the International Grenfell Association to fund this year’s Healers of Tomorrow Gathering, an increase from 2015. That first year, they accepted 12 students. This year, of the 21 students attending, twenty of those are from Newfoundland and Labrador and, for the first time, one from Nunavut.

From August 13-20, the students, ranging in age from grade nine to first year university, stayed at Grenfell Campus. They are students who have expressed interest in health care as a career; not just medicine but also nursing, pharmacy, social work, kinesiology, chiropractic, occupational therapy, medical administration, dentistry, dietetics, etc.

“We’re hoping that enough of them still have a strong connection with their communities that they’ll want to go back and practice in their communities or set up a practice in a region where they have people from their communities come and seek medical services,” Dr. Sturge Sparkes notes.

It seems to be working because although the first gathering focused mainly on learning, Ms. Bennett really liked that they also had the opportunity to partake in Indigenous practices such as medicine walks, singing and drumming, and smudging. “The gathering allowed me to feel more connected with my community and culture. The camp also made me realize that someday I hope to work in my community as a health care provider.”

Dr. Sturge Sparkes says the schedule covered a whole cross section of different professions to show the students different possibilities. It also includes presentations from Indigenous Elders. “I want the students to see that Western knowledge is not the only knowledge of health and wellbeing; that Indigenous people inherently carry vast knowledge and information about health and wellbeing. So, it will help to build a sense of self and see the strengths within their own communities.”

Dr. Sturge Sparkes says the program is worth all the work that goes into it. “With education, you never know the end results and sometimes it takes years to find out. It can transform them. Young people are always worth the investment. A program like this gives them the opportunity to not only choose, but to give back to their community; to be productive community members, with the skills to contribute.”

The Aboriginal Health Initiative in the Faculty of Medicine focuses on bridging programs, services and programs designed to recruit more Aboriginal students into the Faculty of Medicine and heightened cultural sensitivity of both Aboriginal and non-Aboriginal students on issues of Aboriginal health and health care services. Three seats within the Faculty of Medicine are specifically designated for students of Aboriginal ancestry residing in the province of Newfoundland and Labrador.

The International Grenfell Association (IGA) is a non-profit organization that was started in 1892 by British medical missionary Sir Wilfred T. Grenfell to provide health care, education, religious services, and rehabilitation and other social services to the fishermen and coastal communities of Northern Newfoundland and Labrador.
Imagine a crew member is working on the deck of a cruise ship in remote Antarctic waters. Seas are rough and the man is thrown overboard. He requires treatment onboard by the ship’s doctor who, due to the remoteness of their location, is the only person available to assist. What steps must the captain and ship’s doctor take together to ensure the safety of the patient?

This scenario, and about 40 others, has been developed over the past two years by Tuckamore Simulation and Scholarship Research Collaborative, a Memorial University initiative to support research activities using simulation, which is a replication of a task or an event for the purpose of education and assessment.

“The Tuckamore Collaborative functions by the same principles that spruce and balsam trees use to thrive together as a tuckamore in harsh climates,” said Dr. Adam Dubrowski, a professor in the Faculty of Medicine, founder and co-chair of Tuckamore and academic director of the Faculty of Medicine’s Clinical Learning and Simulation Centre (CLSC). “At Tuckamore, we conduct research to build best practices in how to use innovative simulation technology to assist doctors and other health professionals in rural areas to keep up with best skills.”

For the cruise ship situation, several units from within the Faculty of Medicine teamed up with researchers at the Marine Institute to produce a man overboard scenario with rescue at sea.

The man overboard scenario was developed by the team and then filmed for educational purposes using a faculty member at the Marine Institute’s Offshore Safety and Survival Centre in their environmental theatre, which simulates ocean waves, rain, wind, lighting conditions and sounds. It provides an immersive environment for training of maritime personnel but also for conducting research into human and equipment performance for different maritime and offshore emergency scenarios.

“The rescued ‘patient’ is resuscitated aboard the cruise ship in its infirmary,” explained Dr. Dubrowski. “The health care professional (potential trainee) uses the OSSC simulation laboratory to demonstrate the different steps required to move the patient from the water to the infirmary. Then, at the Marine Institute’s Centre for Marine Simulation, the simulation is further developed using a full mission simulator of a ship’s bridge to converse with the captain in order to discuss the patient’s condition and logistics/challenges of patient evacuation in heavy weather.”

Not only are these scenarios available to doctors in rural areas of this province, but they are freely available to anyone on a web-based journal called Cureus, which shares peer-reviewed, Pubmed and Medline indexed papers.

Dr. Dubrowski has partnered with Cureus to create a channel called ASSET (Archives of Simulation Scholarship and Educational Technologies), which is a repository of simulation teaching and learning tools, along with research supporting their best use.

With files from Susan Flanagan, former senior communications advisor (acting) with the Office of the Vice-President (Research).
LEADING CANADA

MEMORIAL INTRODUCES ENTRUSTABLE PROFESSIONAL ACTIVITIES IN UNDERGRADUATE EDUCATION

By Dr. Heidi Coombs-Thorne, Dr. Katherine Stringer and Diana Deacon

The Faculty of Medicine is at the forefront of the shift to competency-based medical education (CBME) in undergraduate medical education in Canada.

CBME is an outcomes-based approach to medical education that focuses on the abilities of health professionals to combine knowledge, skills, values, and attitudes in a professional and clinical context. CBME relies on four foundations: focusing education on patient outcomes, emphasizing learner abilities, de-emphasizing time based learning, and increasing individualized trainee plans for the learner. Building on this competency framework, Entrustable Professional Activities (EPAs) provide a conceptual approach to assessment in CBME.

In 2015, Memorial University became the first in Canada to introduce EPAs into an undergraduate clerkship curriculum. For undergraduate medical education, EPAs are tasks and responsibilities that learners are expected to perform without direct supervision once they have gained specific competence. They help define and determine competence and translate it into practice. EPAs represent the day-to-day work of the professional and incorporate the notions of trust and supervision into the assessment of clinical activities. As such, they help identify the skills required at important transition points in medical education.

To introduce EPAs into clerkship (phase 4), assessment specialists mapped the 13 Core EPAs identified by the Association of American Medical Colleges to the appropriate CanMEDS competencies and then linked specific learning objectives to the appropriate EPAs. They then revised the formative Clinic e-Cards to reflect the language of EPAs. These cards are a regular and required part of the assessment process and include sections for quantitative and qualitative feedback, including narrative comments to coach the learner.

Our new assessment process, based on the concept of programmatic assessment, involves collecting data from many sources (including the Clinic e-Cards) to make decisions about student progress. This method ensures the acquisition of competencies within specific disciplines and the progression of competencies across disciplines throughout clerkship, resulting in a competent graduating physician.

The introduction of EPAs into the undergraduate medical education clerkship curriculum at Memorial University encourages conversations between faculty and students related to specific aspects of student clinical performance. Faculty find it easier to observe and assess students because the assessment is linked to activities that the students perform. It is a concrete and tangible approach to assessing competence and behaviour. Students receive more formalized and regularized formative feedback which maximizes their chances of program success and their preparation for the professional demands of residency.

In 2016, we revised our process to reflect the 12 EPAs identified by the Association of Faculties of Medicine of Canada for the transition from medical school to residency.

As the first university in Canada to introduce EPAs into undergraduate medical education, Memorial University is in the unique position of being able to advise other programs considering EPAs in their competency-based curricula.
AWARDS AND HONOURS

CAME Foundation Wooster Family Grant in Medical Education

Dr. Tia Renouf won the 2016 Canadian Association of Medical Education (CAME) Foundation Wooster Family Grant in Medical Education. Dr. Renouf, one of three recipients of the grant, is the past chair of the Discipline of Emergency Medicine. Her current areas of research include simulation-augmented Health Professions Education, clinical reasoning in the emergency department and communication between rural and urban physicians.

Dr. Renouf is deputy editor of the Cureus Journal for Medical Science, and ad hoc editor for Medical Education, BMJ Open and Annals of Emergency Medicine. She also served as faculty associate with the Governing Council of the Centre for Collaborative Health Professional Education.

The CAME Foundation Wooster Family Grant in Medical Education is meant to support new and innovative projects in medical education that are not part of a larger, formalized and funded education research program.

2017 Discipline of Family Medicine award winners

Dr. Carmel Casey

Dr. Yong Kee Jeon Award: awarded by the full-time Family Medicine faculty to a part-time Family Medicine faculty member for their excellence in teaching Family Medicine residents, contribution to Family Medicine, participation in teaching activities and for being an exemplary physician.

Dr. G Narsing Pradhan

Dr. Craig Loveys Award: awarded by the full-time Family Medicine faculty to a full or part-time specialist faculty member for their excellence in teaching Family Medicine residents, contribution to Family Medicine, participation in teaching activities and for being an exemplary physician.

Dr. Veeragathy Vasanthan

Dr. Gus Rowe Teaching Award: awarded by the Family Medicine residents in recognition of being an exemplary physician, a laudable teacher and for sharing those aspects of his/her skills and ideals which are particularly pertinent to good family practitioners.

Dr. Melanie Van Soren

The Walter and Mildred Miller Award: awarded by medical students to the Family Medicine resident who best exemplifies the qualities of teacher and mentor.

Dr. Paula Slaney

The Enid and Roy Williams Scholarship in Family Medicine: awarded by the Discipline of Family Medicine to a resident who has a professional demeanor and demonstrates a passion for the care of seniors.

Professor Emeritus

A Faculty of Medicine professor is one of four Memorial University professors who was accorded the honour reserved for highly distinguished faculty members. Dr. Rick Cooper was publicly recognized with the designation professor emeritus at a convocation in October.

“The award of Professor Emeritus is not only a great honour to myself personally but to my colleagues at the medical school and the Janeway who I have had the privilege to work with over the years,” said Dr. Cooper. “Since the University Affiliation Agreement was signed on July 2, 1968 the medical school and the Janeway have had a synergistic relationship with each other. Both have achieved the highest standards in their own right but working closely over the years has benefited both.”

For 43 years, Dr. Cooper has taught infectious diseases, microbiology and general pediatrics. He has also been very active clinically in several areas of pediatrics, including general pediatrics, neonatology, child protection, oncology and child development. For almost 30 years of his career, Dr. Cooper was a visiting pediatrician consultant at the Carbonear General Hospital, providing care to children from more rural areas. He recently published The Janeway: 50 Years of Caring for Children and is donating all book royalties to The Janeway Children’s Hospital Foundation.

Family Physician of the Year

Dr. Lynette Powell has been granted the honour of one of Canada's Family Physicians of the Year from the College of Family Physicians of Canada (CFPC). Known as the Reg L. Perkin Awards, the CFPC and its Research & Education Foundation have honoured family physician members who exemplify the guiding principles of family medicine since 1972. Ten family physicians are recognized annually—one representing each CFPC Chapter.

Dr. Powell is a regional physician lead with the faculty's Rural Medical Education Network. She serves as the lead for the Central Stream and works as a staff physician for the Central Newfoundland Regional Health Centre, where she offers in- and outpatient care, operating room assistance, and emergency room coverage, and is a clinical associate in psychiatry and gynecology. She also travels across her region to provide Pap test clinics to underserved areas and sits on the Board of the Newfoundland and Labrador Medical Association and is the chair of its Public Engagement Committee.

Lifetime Achievement Award

Dr. James Rourke was recently selected as a recipient of the 2017 College of Family Physicians of Canada (CFPC) Lifetime Achievement Award in Family Medicine Research. These awards recognize individuals who are trailblazers and leaders in family medicine research and have made substantial career contributions to this field.

Dr. Rourke was also selected as the recipient of the 2017 Calvin L. Gutkin Family Medicine Ambassador Award. This award is made possible through generous donations from friends, family, and colleagues of Dr. Gutkin to the Foundation for Advancing Family Medicine (FAFM) of the CFPC.

Dr. Rourke spent 25 years of his career in Goderich, Ontario, practising rural family medicine alongside his wife, Dr. Leslie Rourke. Their practice was one of the primary rural family medicine teaching sites for Western University in London, Ontario. In 1997 Dr. Rourke became the founding director of the Southwestern Ontario Rural Medicine Education, Research and Development Unit with Western University’s Schulich School of Medicine & Dentistry, and from 2002 to 2004 he was the assistant dean of Rural Regional Medicine. He then served as the dean of the Faculty of Medicine from 2004 to 2016 and as chair of the Association of Faculties of Medicine of Canada from 2009 to 2011 and of the Canadian Medical Forum from 2011 to 2016.
Royal College of Physicians and Surgeons of Canada

Regional Mentor of the Year Award

Dr. Sonia D. Sampson has been named Regional Mentor of the Year by the Royal College of Physicians and Surgeons of Canada. Dr. Sampson is an associate professor and anesthesia research director as well as the anesthesia mentorship and wellness co-director at the Faculty of Medicine.

“A career in medicine is a higher risk choice than many other career options. Mentorship allows me the unique opportunity to help residents and medical students strengthen their self-confidence, find their voice, and exercise their leadership skills,” said Dr. Sampson.

This award recognizes Fellows of the Royal College who have had a significant impact on the career development of students, residents or Fellows.

Marilyn Harvey Award

Dr. Kathy Hodgkinson is this year’s winner of the Marilyn Harvey Award to Recognize the Importance of Research Ethics.

Dr. Hodgkinson associate professor and program coordinator of clinical epidemiology/genetics in the Faculty of Medicine, focuses on genetics and inherited causes of sudden cardiac death, in particular arrhythmogenic right ventricular cardiomyopathy (ARVC) in her research.

Dr. Hodgkinson is part of the team that discovered the ARVC sudden cardiac death gene in Newfoundland and Labrador families, which has led to international research collaborations to explore the genetic connections to sudden cardiac death worldwide.

Humanitarian award

Dr. Andrew Furey, who founded a volunteer medical team to help people affected by the 2010 Haiti earthquake, is the Canadian Red Cross Humanitarian of the Year for Newfoundland and Labrador.

Dr. Furey, associate professor of surgery (orthopaedics), started Team Broken Earth in the aftermath of the earthquake, and has travelled to Haiti more than 20 times since to help provide health care as well as training and educating for local medical professionals. Team Broken Earth has grown to three chapters across the province and counts more than 200 volunteer doctors, nurses and physiotherapists across Canada.

Save the dates for Reunion 2018: October, 11-14

Catch up with classmates and celebrate successes.

LOOKING FORWARD TO CELEBRATING WITH YOU!
“To know that someone is generous enough to leave this kind of legacy is overwhelming. This bursary has helped me finance my education substantially. When something like this comes your way, it’s inspiring.”

Joseph Otto
Faculty of Medicine, Class of 2018
Recipient of the Evelyn Roach Memorial Bursary

Through estate gifts it is possible to make a contribution that will benefit generations of future students, and be a truly meaningful way to be remembered or to honour a loved one.

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