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MESSAGE FROM THE DEAN

It’s been a very busy and productive year at the Faculty of Medicine since our last MUNMED magazine was published. Research has grown over the last year including the addition of a new Canada Research Chair, as well as, Canadian Institute of Health Research grants to support projects such as Indigenous health, breast cancer and genetic coding in viruses, among many others.

I hope you enjoy reading the update on our strategic plan, Destination Excellence, which is one year old and well into implementation. Project teams are working hard to ensure we achieve our goals for the next four years and beyond.

In this issue of MUNMED, you’ll also read about our many learners, who always amaze me with their dedication, our alumni who are all over the world making a difference in their communities, and our faculty and staff who are leading significant initiatives and winning awards for their commitment to our many stakeholders.

Sincerely yours,


Dean, Faculty of Medicine / Professor of Psychiatry
Memorial University of Newfoundland
HBSc, MD, FRCPC, MEd, DFCPA, CCPE, FCAHS
When Dr. Stephen French reflects on this year’s Winter Olympic Games, five words come to mind: “It was just so cold!”

Dr. French (MD’99), an orthopedic surgeon, was the team doctor for Canada’s alpine ski team when they competed in Pyeongchang, South Korea during the Olympics in January.

“There was a real team atmosphere [at the games] that I don’t often get with ski racing individually, because it’s such a focused effort,” said Dr. French. “It was wonderful to watch some of the other events. When everyone has been focused on one thing for four or eight or even 12 years, you recognize that single minded purpose and it’s inspiring.”

Dr. French is no stranger to the demands of elite athletes. He has been involved with the Canadian Alpine team since 2005 and served on the organizing committee’s medical team during the 2010 Winter Olympics in Vancouver.

“When I went to London, Ontario for a fellowship after orthopedic surgery, I met with Dr. Robert Litchfield, who was working with the national ski team at the time and he brought me back into the fold,” said the Corner Brook native.

Dr. French began travelling with the team for about two weeks every year, attending a few world championships and the Vancouver Olympics as the team’s doctor.

In order to serve as a medical professional on Olympic-level teams, the Canadian Olympic Committee mandates that doctors have a Canadian Academy of Sports and Exercise Medicine (CASEM) certification.

“The certification is not focused training like a residency. You have to have so many hours of coverage in international sports venues, which is mostly done through mentorship,” said Dr. French.
The role of a team doctor is highly varied. Some of it is medical advisory, determining if athletes are fit to play, train or compete. The other half is working with a team’s strength and conditioning coach and physiotherapist on the individual needs of the team, as well as managing any chronic injuries.

“It’s very rare that you have to go to the hospital with athletes, but if we do, they are usually stabilized in the country that we are in. Then the real work begins for us, which is coordinating the type of follow up care they receive back in Canada.”

NEXT LEVEL WINTER GAMES

“Again, I cannot stress just how cold it was the first week we were there, definitely colder than Labrador.”

Dr. French confessed that a lot of the injuries treated by medical staff were mostly for frostbite.

Pyeongchang is regarded as one of the coldest regions of South Korea. This, combined with the high wind gusts, delayed events and caused concerns for athletes’ performance.

“Our main goal was just to keep all the athletes warm. Everyone was doing warm up drills inside and only venturing out when it was time to compete. That’s something I’ve never seen before.”

The weather also factored into doping control at the games. “Athletes can get flagged for drug testing at any time. So our phones would go off when one of them got selected, because a doctor had to be with them during testing, and so we had to figure out how we were going to do the test and keep the athlete warm.”

Understanding the rules and regulations around doping, better than even the athletes, is a must for any doctor travelling to the Olympics, Dr. French believes. They should also be as comfortable with the rules as the technicians administering the tests.

“If they came to our condo at say 7 a.m. and our training lane opens at 8:05 a.m. and we had 60 minutes to get to the venue, you better know how these tests run and when to push back,” he added. “I did have to contact the head of doping control once to tell them their time frames were too tight. I told him, I know if we refuse a test it’s an automatic
positive, so we’re not refusing, but you now need to provide us a vehicle to get us to our training venue on time. And thankfully, their answer was ‘of course.’”

From handling medical needs during competitions, to follow up care, to advising on proper nutrition and banned substances, to being a familiar face for athletes, team doctors wear many hats.

A LIFE DEDICATED TO SPORTS
Dr. French has also been on the other side of the stethoscope.

“I was a ski-racer in the winter and took part in triathlons over the summers growing up. A few of us from Corner Brook had taken a year off before starting school to compete in ski racing. After that we all went to university to get an education because that’s where you really learn your discipline.”

Dr. French adds with a hearty laugh, “and you also learn you’re not always going to make a living doing what you wanted to do, so you better learn how to do something to pay the bills!”

After completing his residency and fellowships, Dr. French and his wife decided to move to Calgary when a position opened up at the South Health Campus Hospital. The city is now home to Dr. French’s own orthopedic practice, and where he is also a medical staff member for the Calgary Flames.

“I work every second home game as a consultant for the musculoskeletal injuries, and truth be told there is usually one or two injuries per game so the role is a league and players association requirement,” he said. The game nights run pretty late and Dr. French is thankful for his family’s support and understanding.

“Everyone needs something outside of their day-to-day stuff and this is what I do.”
Q&A WITH DR. SOHAIB AL-ASAAED,
NEW ASSOCIATE DEAN OF POSTGRADUATE MEDICAL EDUCATION

What are you most looking forward to in your new role as the associate dean of Postgraduate Medical Education?

I am passionate about connecting people and ideas in an efficient and nimble manner so that we can showcase the depth of skill and potential of this faculty in the context of residency education. I take this position knowing I have big shoes to fill and hope to execute the duties with the deft and passion that Dr. Samarasena has displayed over the past 13 years.

Why did you decide to focus your career in oncology?

Oncology seems like an odd career choice for many, but it does fit my personality. I went into medicine because I believed in the uniformity of the human condition and that all beings deserved excellent and compassionate care. As a resident, I saw a range of patients in oncology, from those who are quite ill but receive chemotherapy and are cured, to those who were at the end of life. To be part of a person’s life and most intimate moments as they face their biggest fears and challenges is, I believe, one of the greatest honours entrusted to a physician.

I gain perspective on my own life and humility by living through the individual journeys of my patients. I cannot think of many other specialities where I can move from the exhilaration of a “clear CAT scan” to holding the hand of a person whose suspicions of a fast approaching end of life I confirmed. It is a specialty where I can ‘heal’ by using the most toxic of medications or by just sitting there and listening.

It helps that I specifically chose the disease site of genitourinary malignancies because it offered the entire spectrum of experiences.

Why did you choose to settle in Newfoundland?

There’s a reason I’m here. My journey back started many years ago, when I interviewed for CaRMS in internal medicine. I was impressed by the tight-knit nature of the residents, the small faculty to resident ratio and lack of multiple hierarchies. At the time, I had no connection to the place other than a “knowing” that I belonged, or rather could belong. After my internal medicine training, a core medical oncology subspecialty training and a clinical fellowship in genitourinary malignancies at Western University in London, Ontario, I had to look for a grown-up job. I went coast-to-coast and decided that I would rather come “home” to pursue my goals and dreams and in the meantime, give back to the community that made me feel like I belonged.

I have been here for about five years continuously. There is not a week that goes by without me falling in love with the place all over again. There is history hidden and on display in every corner of downtown, natural beauty abounds and the potential is immense. I love visiting large cities, and had grown up in places with populations in the millions. But while it sounds cliché, this feels like home more than any other place. I can’t think of many places I would rather raise kids. Besides, I don’t know of any other place that celebrates men in mermaid costumes on an internationally recognized calendar and for a great cause!
DESTINATION EXCELLENCE: YEAR ONE

By Gerona McGrath, project manager

The Faculty of Medicine’s strategic plan, Destination Excellence, is now in its first year of implementation and a lot has happened since its launch in December 2017.

During the first year, we were busy informing various stakeholders about the spirit and language of the plan, establishing short and long-term priorities, defining what success means, and planning how we will measure progress and performance.

At the beginning of the implementation phase, the Strategic Planning Working Group (SPWG) was formed to oversee the development of both the Destination Excellence Implementation Steering Team (DEIST) and the project teams. The SPWG will ensure there is regular communication to stakeholders regarding Destination Excellence updates, including implementation progress and general updates regarding project team work. The group will meet once a month for the next year until all project teams are in place.

The SPWG consists of:

- DR. MARGARET STEELE, dean
- GERONA MCGRATH, project lead
- ANNE BECKER, consultant
- MICHELLE OSMOND, communications
- CAROL ANN WALKER, administrative support

DEIST is comprised of a diverse group of leaders from different levels across the Faculty of Medicine including learners, faculty and staff. DEIST had its inaugural meeting on June 20, 2018. The mandate for the team includes the following:

- Spearhead implementation of the strategic plan, via project teams;
- Help ensure inter-dependent oversight and direction of the strategic plan implementation;
- Build and sustain ongoing commitment to implementation of the plan;
- Actively manage and monitor implementation of the plan across all strategic pillars;
- Manage all risks associated with implementation; and
- Ensure we are achieving key performance indicators and identified milestones.

To see the full membership, click here.
The strategic plan recognizes the need for innovation and change, and motivates us to think, prepare and act in new and different ways. As a next step, we have formed several project teams to oversee and take responsibility for implementation of specific initiatives to reach our goals. Those teams are:

- RESEARCH
- SOCIAL ACCOUNTABILITY
- WELLNESS
- SCORECARD/ DATA MANAGEMENT
- MENTORSHIP

In the coming months, the project teams, SPWG and DEIST will move forward with the implementation of the plan, ensuring we achieve our mission and our vision. If you have any questions about the implementation of Destination Excellence, please feel free to contact me.

**NEWS HIGHLIGHTS**

**TOP CANADIAN HONOUR:** A team of researchers are winners of the Governor General’s Innovation Awards for their ground breaking discovery that’s saving the lives of those affected by a deadly genetic disease.

**REPRESENTING N.L.**: One of Memorial University’s most prominent faculty members, Dr. Mohamed Ravalia, has been appointed as an independent senator with the Government of Canada.

**FACULTY OF MEDICINE UNIT ASSESSMENT COMPLETE:** A Unit Assessment report which was ordered for the Faculty of Medicine is complete and has been reviewed and accepted President Gary Kachanoski.

**HIGHEST HONOUR:** Dr. Jane Green has been named an officer of the Order of Canada.

**THE DOCTOR IS IN:** For the sixth time, the Society of Rural Physicians of Canada recognized the Faculty of Medicine with its Keith Award, given annually to a Canadian postgraduate medical program that has excelled in producing rural doctors.

**EXPERT EXPANSION: NEW CANADA RESEARCH CHAIR:** Incoming researcher Dr. Touati Benoukraf has been appointed Tier 2 Canada Research Chair in Bioinformatics for Personalized Medicine.

**EYE ON INNOVATION:** A pair of researchers from the Faculty of Medicine received more than $3.8-million from the Government of Canada for cutting-edge health research.
A CLEAR PATH

In a hospital on a remote hilltop in a small northern town, Dr. Robyn Ndikumana found one more reason to fall in love with Rwanda.

The fourth year anatomical pathology resident travelled back to the developing nation after receiving the American Society of Clinical Pathology (ASCP) Foundation Trainee Global Health Fellowship. The grant provides exceptional pathology residents the opportunity to take an elective rotation in a developing country as part of Partners for Cancer Diagnosis and Treatment in Africa.

“There were about ten countries on the list, and there was no doubt in my mind that Rwanda was where I wanted to go,” explained Dr. Ndikumana, the only Canadian to receive the competitive grant this year. “It definitely has a special place in my heart.”

Before attending Memorial to earn her MD, Dr. Ndikumana completed a bachelor of science in nursing (BScN) at St. Francis Xavier University in Nova Scotia and spent a year in Rwanda as a nurse.

“The people there are incredibly warm, hard-working, and resilient,” said the Corner Brook native. “It’s also where I met my husband, Adrien.”

Dr. Ndikumana spent this past June shadowing three pathologists at Rwanda’s King Faisal Hospital in Kigali and the Butaro Cancer Center of Excellence (BCCE) at the Butaro Hospital to learn about the country’s unique pathology practices. “I had wonderful teachers who gave me many invaluable opportunities to learn about various types of cancer and diseases related to tropical medicine,” she said.

Rwanda is the first country in East Africa to open a cancer centre in a rural location. With the majority of the country’s population of approximately 12 million people residing outside of the capital city of Kigali, Dr. Ndikumana found this approach to cancer patient care very refreshing and logical.

“I highly recommend other learners visit this site if given the opportunity. This experience has further solidified my choice of a career in pathology, as being able to arrive at the correct diagnosis is critical to allow patients to receive the correct treatment in a timely manner.”
SHOWCASING OUR ARTISTIC SIDE

The Faculty of Medicine community took time to stop and take in artwork at its inaugural art gallery this Spring. Learners, staff and faculty were invited to submit their work for the event, which included painting, sculptures, photos, music and more.

It was initiated “to capture the essence of an inherent artistic culture in Newfoundland, within medicine,” said Travis Pickett, a fourth-year medical student and organizer of the event.

The students plan on making this an annual event.

“Opportunities such as this fall under the umbrella of supporting a wellness culture in medicine; when entering the field, many individuals feel pressure to suppress artistic endeavors to keep up with and adjust to the lifestyle of medicine.”

~Travis Pickett
A YEAR IN THE LIFE

The Faculty of Medicine’s new Care of Underserved Populations Enhanced Skills Program (CUP) recently celebrated its first anniversary. The program’s director, Dr. Russell Dawe and first resident, Dr. Melanie van Soeren, share their thoughts about the past year and the program’s evolution.

How does the program work?
Dr. van Soeren: CUP is an enhanced skills program offered to graduates of family medicine residency programs who are looking to enhance their capacity and knowledge in caring for communities who are usually underserved. There are three rotations: inner city, which took place in St. John’s; international, in Nepal; and Indigenous, in Sheshatshiu, Labrador.

What drew you to CUP?
Dr. van Soeren: I had always been interested in a global health focus for my family medicine career, but once I learned more about health equity and the disparity in terms of services here at home, my focus shifted a bit. CUP was really the perfect program for me because it offered both a local and international component.

Why focus on underserved populations?
Dr. Dawe: Social justice drew me into medicine and health equity is what I’m really excited about. In hindsight, there has been a lot I’ve had to un-learn. My colonial roots run deep, and I owe a great debt to many colleagues and community partners who have helped me understand that better. Now that’s what we’re trying to do with CUP.

I think that kind of perspective is key to equipping family doctors to provide care and advocate for underserved populations that often face multitudinous barriers to care.
What organizations are partnered with CUP in St. John’s?

Dr. van Soeren: Our main collaborator is the Downtown Health Collaborative which is comprised of health-care professionals who work at a few different sites in St. John’s including the Gathering Place.

The approach here is bringing the services to where people are. The traditional model of asking people to come to a clinic at a specific time, to abide by specific rules doesn’t often work and you end up leaving people out and creating barriers. The Downtown Health Collaborative is trying to be as low barrier as possible.

I also spent one half day per week working at the Refugee Clinic at Memorial’s family practice unit. Here, I had exposure to care of individuals with conditions such as tuberculosis, hepatitis B and post-traumatic stress disorder.

There was also opportunity to gain exposure to transgender health care at Clinic 215, a local community family medicine clinic where the inner city preceptors work.

And what is CUP’s role in Nepal?

Dr. van Soeren: Our focus was capacity building. We partnered with the Patan Academy of Health Sciences (PAHS), a medical school in Nepal whose main goal is to address issues of health equity in rural areas where there is a real lack of medical services. PAHS aims to give their students the skill set to work in rural areas, with support from rural Canadian family physicians, including the CUP resident. We act as preceptors and mentors for students. We’re also there to help train and support faculty who will provide that teaching now or in the future.

CUP has also partnered with the Women’s Rehabilitation Centre in Nepal, a human rights organization working to eliminate the trafficking of women and girls. I contributed to the development and running of a workshop focused on trauma informed practice for psychosocial counselors who are affiliated with their organization.
The other big portion of the program is a rotation in Labrador, what was that like?
Dr. van Soeren: I was working as a family physician in Sheshashiu and living nearby in Northwest River. I was working at the Mani Ashini Clinic, which is owned by the Sheshatshiu Innu First Nations who also direct the services being provided. It was a combination of clinical work and research. My clinical work also included emergency shifts at the Labrador Health Centre and some work with the prison in Happy Valley-Goose Bay.

Was it hard to integrate yourself into the community?
Dr. van Soeren: There’s always a period of time where you have to work on establishing trust, which I worked to do over the five months I was there.

The benefit of the way CUP was designed is that I was living right there. I was able to pop over to people’s houses for tea or go to the hockey tournament. I tried to be as visible as possible.

I also was able to participate in the Gathering, which is a week-long gathering of Innu from Labrador and Gull Island in Quebec. Around 1,000 people were there in Innu tents and we had a small clinic tent set up for any medical needs.

The goal was to support people staying on the land as long as possible, living in a traditional way, which is an Innu health priority. From a service standpoint it was great that we were able to provide that care on site and from an experience standpoint, for me, it was fabulous.

We heard there was also a bannock competition?
Dr. van Soeren: Yes! Bannock is traditional Innu bread, common among various First Nations groups in Canada, and another resident and I were asked to judge bannocks since we were outsiders and wouldn’t know which bread came from which family.

There’s also a research project CUP is conducting in Sheshahiu. What does that entail?
Dr. van Soeren: The idea of the project was created by people from Sheshahiu, and focuses on improving palliative care in the community. It’s a study that is looking into qualitative and quantitative current end
of life services and aims to provide recommendations on how they could be improved to better meet the needs of the community, culturally and spiritually.

Dr. Dawe: It’s virtually impossible for a resident to conceive a contextually-relevant topic, establish the necessary community partnerships, gather data in the field, and then analyze and disseminate the findings in a culturally safe manner in less than 12 months (i.e., the duration of CUP). So, CUP has partnered with Sheshatshiu Innu First Nations, Innu Nation, and the Labrador Institute, with support from Memorial’s Primary Healthcare Research Unit, to run a longitudinal patient-oriented research project, based in Indigenous health. Choosing to do patient-oriented research in particular has been important to the CUP resident’s learning because, as a style of research, it puts the members of the community in the driver’s seat. Also it stimulates many conversations between the CUP resident, and the community members and leaders in Sheshatshiu.

How do you see CUP expanding in the future?
Dr. Dawe: My goals is to continue developing the relationships we have formed locally, provincially and internationally. Each of these partners have complex goals and needs, and the nature of our work with them cannot be static but must evolve over time to remain relevant and sustainable. The research we’re doing in Sheshatshiu is in its early stages, but if it is well-received I would anticipate investigating Indigenous palliative care needs on a larger scale, to include additional communities. Our current international focus is in Nepal, but Memorial has also had an approximately 30-year relationship with Makerere University in Uganda, which I visited two years ago.

Eventually, I would like to see CUP take two residents per year. This would mean our two local sites (Sheshatshiu and St. John’s) would be staffed for 10 months of the year. For the moment, however, we are taking our time to try to get it right from the beginning. Cultural safety is not always easy or straightforward, and we want to lay a solid foundation to build upon for years to come.
What if we could stave off Alzheimer’s disease by playing video games?

Dr. Benjamin Zendel, a Canada Research Chair (CRC), believes you can. Dr. Zendel, CRC in Aging and Auditory Neuroscience, was part of a recent study that found playing video games on a regular basis can improve cognitive functions in seniors.

The study, led by University of Montréal professor Dr. Gregory West, also included partners from Institut Universitaire de Gériatrie de Montréal and Montreal’s Douglas Hospital.

In two previous studies, young adults were asked to play 3-D video games of logic and do puzzles on platforms like Super Mario 64 and Tetris. Findings showed that the gray matter in their hippocampus increased. That’s the region of the brain associated with spatial and episodic memory, a key factor in long-term cognitive health. In it, gray matter acts as a marker for neurological disorders that can occur over time, including mild cognitive impairment and Alzheimer’s.

Dr. Zendel and his colleagues wanted to see if they got the same results with healthy seniors.

They recruited 33 people, aged 55 to 75, and assigned them to three separate groups: one that played Super Mario 64 for 30 minutes a day, five days a week; one who took piano lessons for the first time with the same frequency and sequence; and one who did not perform any particular task.

The experiment lasted six months and was conducted in the participants’ homes.

The researchers used both cognitive performance tests and magnetic resonance imaging (MRI) to measure variations in the volume of gray matter, observing brain activity in planning, decision-making and inhibition; motor control and balance; and the hippocampus.

According to the MRI results, only the participants in the video game group had increases in gray matter volume in the hippocampus. Their short-term memory also improved.

The tests also revealed gray matter increases in the other areas of the brain for participants who took piano lessons, whereas some degree of atrophy was noted in all three areas of the brain among those who did not do any of the tasks.

The conclusion: 3-D video games engage the hippocampus into creating a cognitive map, or a mental representation, of the virtual environment that the brain is exploring. Several studies suggest stimulation of the hippocampus increases both functional activity and gray matter.

Conversely, when the brain is not learning new things, gray matter atrophies as people age. So, perhaps we can reverse those effects and increase volume by learning something new. These findings could be used to drive future research on Alzheimer’s, since there is a link between the volume of the hippocampus and the risk of developing the disease.
Three Faculty of Medicine learners have been spending time at Her Majesty’s Penitentiary (HMP) in the name of learning.

Second-year doctor of medicine (MD) students Matthew Downer, Josh Lehr and Madison Lewis were the first MD students to take part in an annual community training fair for inmates at HMP.

They learned about how the facility functions, greeted inmates and learned first-hand about the issues that contribute to poverty and social challenges.

The Workin’It Training Fair is organized each year in partnership with HMP, the Canadian Mental Health Association, the John Howard Society of NL and the Community Employment Collaboration. Community organizations and training partners set up in a gymnasium and spend the day speaking with over 100 inmates about their career and employment options once they’re released, and offer a flu shot clinic at the same time.

Elayne Greeley is a coordinator at the Community Employment Collaboration in St. John’s. She’s also part of a research exchange group with the Newfoundland and Labrador Centre for Applied Health Research. Along with Dr. Jill Allison, coordinator of the Faculty of Medicine’s Global Health program, she is co-convening a group called Service Learning in Community Engagement and admittedly is always looking for opportunities to connect the university with things going on in the community.

Dr. Allison and Ms. Greeley jumped at the opportunity to provide students with a chance to learn and gain insights on how employment impacts health, meet community career and employment staff, and see the services available after release.

“The whole purpose of the training fair is to create hope and planning for the individuals because, as you can imagine, everyone inside has worked before and when they come out, they will work again,” explained Ms. Greeley. “It gives them the opportunity to think about whether the work they’ve done has contributed to where they are or whether it’s been a positive or negative component of their lives and whether going back to school is where they should focus or doing different training. It’s changing the conversation around employment within that population.”

“Although some were dismissive, some were really determined to make a positive change upon finishing their sentence,” said Mr. Lehr. “Many of them expressed their gratitude for us being a part of the jobs/education fair and giving them hope and encouragement.”

“When inmates get released from prison, they have nothing. Some of them have trouble finding money, getting a job, etc.” noted Ms. Lewis, “As a future physician, I will be dealing with these types of populations. If I choose to practice as a physician in St. John’s, knowing about these resources and organizations will help me provide better care to my patients.”

Mr. Downer also felt it was a tremendous learning opportunity. “It was a fantastic way for us to be able to engage our community here in St. John’s, and I feel incredibly fortunate to have had this learning experience.”
Lt. (N) Tyler Cole serves in the Navy, is a member of the Sea-Hawks cross-country team, is a married father with a four-year-old son, and is studying to become a doctor – all at the same time.

While it seems like a lot to juggle, the second-year doctor of medicine (MD) student has a secret weapon. “My wife Karen really keeps everything organized for me,” said Lt. Cole, modestly. “She’s absolutely amazing.”

Lt. Cole’s medical career started off a bit differently than his fellow classmates. In 2008, he was finishing up his bachelor of engineering when his father passed away of pancreatic cancer. It was then Lt. Cole knew he wanted to go into medicine, but the timing didn’t work. Instead, he completed a masters of engineering at Memorial. After graduating, while still thinking about taking the MCATs, Lt. Cole enrolled in the Royal Canadian Navy as a way to give back to the community. “I love the military, I didn’t realize it would be such a good fit,” said the Baie Verte native. Over the next six years, Lt. Cole and his family travelled from Quebec, to Halifax, to Victoria and finally to Ottawa where he was posted in the naval architecture building as a combat systems engineering officer.

There, Lt. Cole learned that the Canadian Armed Forces would consider offering financial assistance to prospective medical students if they got into a medical school. In exchange, graduates would serve as doctors in the military for five years.

With much consideration, Lt. Cole decided to take the MCATs. “Over the next year I had to study for the MCATs, plus work my job, take care of my one-year-old son, and do submarine training. It definitely was a full plate.”

His hard work paid off however, as Lt. Cole earned a coveted spot in the MD program at Memorial. “I had only applied to Memorial

“My first year was fantastic. I told Karen I should have been doing this years ago. But I don’t regret the journey I took to get here. I wouldn’t have been the same otherwise.”
because I wanted to go back home. And I’m really happy to be back,” he said. “The by’s in the military used make fun of me for being such a proud Newfoundlander!”

**MAN IN CONSTANT MOTION**

Lt. Cole’s drive stems from his competitive nature, something he feeds by running for Memorial’s cross-country team and competing in triathlons during his spare time.

“I hadn’t been training while I was posted, so when I came home, I started to get ready for the Tely 10, just for fun,” said Lt. Cole. “And since there was a gap on the cross country team last year, the coach, Art Meaney, asked me to tryout. I turned him down, but then he went to my wife for help,” he adds with a smile.

Lt. Cole is also the team’s captain. “We’ve been working hard to get into shape for the upcoming season, which will be my last. I only have one year of eligibility left and I won’t be competing during clerkship.”

Thinking about how training will fit in with school, Lt. Cole shrugs confidently and says, “we’ll make it work. I have a great support system here.”

Most of Lt. Cole and his wife’s family live on the island, including his grandparents in Baie Verte. “I actually did my rural placement there in the summer,” he said. “It was funny because most of my patients knew so much about me before I even got there.”

Lt. Cole and his family plan to enjoy the next couple years in one place before he graduates and is back on duty.

“I’ll be going into family medicine as a general duty medical officer,” explained Lt. Cole. “I’m also really interested in sports medicine, which you can train for in the military. Or orthopedics. But I’m on the outside looking in right now and I don’t really know how competitive those positions are.”

“We’ll see where I end up – that feels so far down the road right now.”

Tyler and his wife Karen at last year’s white coat ceremony.
There are at least 200 people in Newfoundland and Labrador (NL) with known inherited defects in the BRCA genes; mutations that cause very high rates of cancer.

For women with BRCA, the risk of developing breast cancer can be as high as 75 per cent and the chance of getting ovarian cancer up to 40 per cent. For men, the gene mutation means higher risks of prostate cancer.

Research has shown that one in 300 people worldwide carry such a faulty gene; meaning there could be an additional 1,300 people in this province with the mutation.

National recommendations state that mutation carriers can use screening and preventative surgeries to eliminate or lower their cancer rates, or to detect cancers earlier, which improves their survival by more than 70 per cent.

Early detection does make a difference: Research shows that preventative ovarian surgery is highly effective because ovarian cancer has no proven screening test and a poor survival rate. Meanwhile, stage one breast cancer has a survival rate of 90 per cent whereas a woman diagnosed at stage four faces a survival rate of 15 per cent.

The NL BRCA Research Study, led by Dr. Lesa Dawson, an associate professor at the Faculty of Medicine and a gynecologic oncologist, discovered that more than half of BRCA carriers in NL are not accessing cancer prevention and screening according to national guidelines.

With funding from an NL SUPPORT Research Grant, Dr. Dawson and her team are hoping to find out why.

In NL, routine clinical BRCA testing has been available since 2006 for patients from families with multiple relatives having cancer at a young
Our study has proven that women who attend a clinic offering specialty cancer genetics expertise are far more likely to access proper cancer prevention and screening at the right time.

As Dr. Dawson points out, there is no co-ordinated support or follow up for these very high risk individuals, nor is there quality assurance around completion of screening or prevention interventions. The quality of care for these mutation-positive Newfoundlanders rests solely on the individual themselves or the family physician.

There’s no initiative specifically directed at following these women largely because they haven’t had cancer yet, so they don’t fit under a program.

Our study is developed with patients as research partners from the outset and includes them in the identification of solutions and recommendations. We will report patient-identified priorities and identify barriers needing adjustment in the system. These will be effective from a patient perspective, are not complex and can be delivered in the short term.

The research team and patient partners are drafting recommendations about how the province can build “Inherited Cancer Prevention NL,” providing mutation carriers with effective navigation and access to expert advice.

Dr. Dawson is very passionate about the power of prevention. “We have an opportunity to identify these families and implement cost effective care that saves lives.”
MEMORIAL’S OPIOID AWARENESS AND SUPPORT TEAM

According to a report published by the Government of Canada, there were approximately 4,000 apparent opioid-related deaths in the country in 2017, 92 per cent of which were accidental or unintentional.

A student interest group at the Faculty of Medicine is trying to make a difference in the ongoing opioid crisis.

Matthew Downer and members of the Opioid Awareness and Support Team (OAST) want to see that number decrease, and increase knowledge and awareness of opioid-related issues. They’re engaging with community partners to create a new network of education programs and awareness initiatives.

“At first, we wanted to find a way to make a difference in our campus community,” said Mr. Downer, a second-year MD student who started the group.

Last year, Mr. Downer and a couple of other medical students presented a naloxone and opioid overdose awareness session to Memorial residence advisors, helping them recognize the signs of an overdose and how to respond and inform Campus Enforcement Patrol.

“We’re mostly sitting in classes, so this was a chance for us to get our hands dirty and educate people outside of the medical community,” said Philip Hillier, also a second-year student and a member of OAST.

The session inspired OAST to expand their mission into a 360-degree awareness plan focused on education and collaboration. To put their ideas into practice, OAST applied for funding from the Fulbright Canada Community Leadership Program. Both Mr. Downer and Josh Lehr, another OAST member, are Fulbright Canada alumni and former Killam Fellowship recipients from Memorial.

“We were interested in creating awareness about this issue even before I started here at the Faculty of Medicine,” said Mr. Downer, who is also a member of the Canadian Federation of Medical Students (CFMS) National Opioid Task Force. “And we had a feeling Fulbright would be on board with this project.”

Fully funded as of April, OAST has begun working with Safe Works Access Program (SWAP), a branch of the AIDS Committee of Newfoundland and Labrador, on workshops for interested students. These workshops provided them with an understanding of how to recognize and respond to an opioid overdose.

OAST has also partnered with the faculty’s Division of Community Health and Humanities to provide educational material for the new school year. The group’s first academic-half day
An experiential learning component is important to those of us in community health,” said Dr. Jill Allison, one of OAST’s faculty facilitators. “And we need to remember, as medical practitioners, that addiction can touch everyone’s lives, so I think this group is doing a great job of opening up communication to help reduce and de-stigmatize addiction.”

Dr. Stephen Darcy, assistant professor in the Family Medicine Division and an OAST faculty facilitators, adds, “The initiative undertaken by OAST is a very important one given our present circumstances. Bringing awareness to physicians in training will only serve to improve the quality of care for our future patients.”

“I think there’s a gap in our education surrounding opioid issue,” said Kieran Lacey another second-year student. “So I wanted to get involved with the group to learn more myself, and then teach other undergraduate students because there’s not much information out there for us right now.”

Over the next year, OAST is looking to build more community partnerships including one with Choices for Youth on addiction treatment and harm reduction strategies.

“On my placement in my hometown Moncton, New Brunswick, I saw an increasing prevalence of opioid use and I thought group this was a great opportunity to help spread awareness to better inform people in my community both here and back home.”

~ Brooke Turner, second-year MD student.

EXPLORING CULTURALLY APPROPRIATE CARE

In a 2012 survey, 22 per cent of NunatuKavut people reported feeling depressed. The national average ranges from 4.3 to 7.3 per cent. The survey was part of a NunatuKavut Community Health Needs Assessment (CHNA) where many participants of the coastal Labrador communities also said there is a ‘culture of silence’ regarding mental health issues.

Dr. Jennifer Shea is hoping to change that. She’s embarking on a project that she hopes will de-stigmatize mental health within the NunatuKavut Community Council (NCC) and enhance access to mental health and addictions programming.

A Memorial alumna and assistant professor of Aboriginal health in the Division of Community Health and Humanities, Dr. Shea says mental health and addictions is a critical issue in this province.

Her research is rooted in the local expertise from diverse stakeholders, including patients, families, health-care providers and community leaders. It includes community-based participatory and decolonizing approaches.

“The lived experience and local knowledge within NunatuKavut’s territory will guide all aspects of the project,” she said, adding that community leadership and governance is critical to the work. “Community members are the experts on the reality of mental health and addictions in NunatuKavut communities. They know first-hand what’s available, what works and doesn’t work, and what’s needed to close the gap.”

According to Dr. Shea, mental health and addictions services are often based on western ideas of health and therefore not always culturally appropriate for Indigenous peoples. “Indigenous culture, resilience and holistic definitions of health are often not integrated. Models of treatment may neglect an understanding of the trauma endured through colonialism, which impacts mental health status.”

“A critical piece of reconciliation is confronting our painful past, and this is a requirement of all Canadians. To treat the immediate symptoms, such as depression, without an acknowledgement of the past and its impact overlooks a key piece of the puzzle. We want to build on the resilience and strong culture
of Southern Inuit to design a program with and for the community that can be utilized beyond the project to improve health in the communities.”

Dr. Shea and her interdisciplinary team, which includes community members, received $100,000 from the Canadian Institutes of Health Research for the project. The 18 member team includes co-principal investigators Julie Bull (Centre for Addiction and Mental Health, University of Toronto) and Darlene Wall (NCC social sector manager). From Memorial’s Faculty of Medicine, co-investigators are Dr. Fern Brunger, Dr. James Valcour, PhD candidate Nathaniel Pollock and collaborator Dr. Michael Jong.

The project will include contributions spanning the vast NunatuKavut territory, for example sharing circles, that will allow community members to share their experiences and expertise through storytelling, and individual conversational interviews.

“Members of NunatuKavut are strong, determined, resilient and caring. Community is of the upmost importance,” Dr. Shea noted. “For me, this is a continuation of an existing relationship and I feel honoured and privileged to continue to work with and learn from members of NCC.”

EXCERPTS FROM PROJECT LETTERS OF SUPPORT:

“This program will help our people take control of their personal well-being and also provide community support and outreach.”
~ Resident in Labrador West

“Having this program in place would not only help people to become more aware about their illness but would be more open and seek the proper help.”
~ Resident of Black Tickle

“Our members would take part in developing and designing the program as what is needed, NOT what someone tells us we need.”
~ Resident in Port Hope Simpson
In a 2018 announcement by the Canadian Institutes of Health Research (CIHR), three researchers from the Division of BioMedical Sciences received significant funding this year, energizing Memorial’s research expertise while further boosting its international reputation for innovative health-related studies.

**DR. DAKE QI**  
Assistant professor in cardiovascular sciences  
Division of BioMedical Sciences  
**$650,250**

Macrophage migration inhibitory factor (MIF) is a pro-inflammatory factor, well known to be involved in inflammation and also to play a role in regulating metabolism. Dr. Qi has a broad research interest in studying MIF family proteins and human diseases, especially heart disease and metabolic syndrome.

His present research explores the molecular mechanisms of MIF in mediating metabolic dysfunction induced by atypical antipsychotics (AAP).

Severe psychiatric disorders, such as schizophrenia, bipolar disorder and major depression, affect more than seven per cent of the Canadian population, especially youth. AAP have become the first-line therapy for psychiatric disorders, but they are often associated with severe metabolic side effects, such as insulin resistance and type 2 diabetes. MIF plays a crucial role in the development of metabolic dysfunction induced by a classical atypical antipsychotic, olanzapine. Dr. Qi hopes to develop a novel strategy to inhibit metabolic side effects and heart disease during atypical antipsychotic treatment. He believes that MIF inhibitors will improve the clinical psychiatric treatment with atypical antipsychotics. Based on the results of these experiments, his team is planning to extend the use of MIF inhibitors to clinical practice and explore the pharmaceutical possibility of making a combined MIF inhibitor and AAP therapy.

Dr. Qi hopes to develop MIF family proteins as a potential therapeutic target for diabetes and heart disease as well as improve the pharmacological treatment of mental illnesses. His research could have a tremendous and direct impact on the quality of life for individuals suffering from diabetes and heart disease in Newfoundland and Labrador, and beyond.
**DR. CRAIG MOORE**  
Tier 2 Canada Research Chair in Neuroscience and Brain Repair  
Assistant professor in neuroscience  
Cross appointment, Discipline of Medicine, neurology  
Division of BioMedical Sciences  
**$600,525**

Multiple sclerosis (MS) is a chronic brain disease without a known cause or cure. Current drugs used for treating MS patients target the immune system and have very little effect on preventing disease progression and neurodegeneration. While cells of the immune system play a significant role in MS, novel strategies that both protect the brain and promote repair following injury must be uncovered. Such strategies would not only benefit MS, but other neurodegenerative conditions, including Alzheimer’s, stroke, Parkinson’s disease and Amyotrophic Lateral Sclerosis (ALS).

MS is a highly complex disease that involves significant cross-talk between cells of the brain and immune system. Unfortunately, many of the drugs that selectively target molecules involved in this cross-talk are ineffective in most neuroinflammatory conditions, including MS.

Dr. Moore’s research focuses on a newly discovered method of cell-to-cell communication. In MS, his team hypothesizes that exosomes deliver molecules called microRNAs that help to mediate inflammation, neurodegeneration and brain repair. In the future, the ability to alter microRNA profiles within exosomes may lead to an exciting therapeutic avenue to explore in MS and other brain diseases.

**DR. BRUNO STUYVERS**  
Professor of cardiac and renal physiology  
Division of BioMedical Sciences  
**Bridge Grant, $100,000**

This is a new research program dedicated to the mechanisms of ventricular tachycardias (VTs) responsible for Sudden Cardiac Death (SCD) in ischemic heart diseases, which is still the leading cause of mortality in Newfoundland and Labrador; far ahead of the genetically induced cardiac diseases. Dr. Stuyvers’ project is anticipated to provide clinically detectable indicators of the risk of VT and to identify molecular targets for developing selective treatments of patients at risk of SCD.
INAUGURAL AWARD CELEBRATES PROFESSIONALISM

At the 2018 Awards and Scholarship ceremony, the inaugural Canadian Medical Association (CMA) Foundation 150th Anniversary Award was presented.

Dr. Christopher Grant (MD’2018), who came to the Faculty of Medicine as a pharmacist, was the first recipient.

“I am constantly in awe of the calibre and accomplishments of my classmates,” Dr. Grant said. “It was quite an honour to receive the award. I am very grateful to the CMA Foundation for the recognition and financial support of the award. I’m also quite thankful for the support from family, friends and mentors.”

It’s not Dr. Grant’s first award while a learner at Memorial. He also received the Student Innovation Fund from Memorial University Student Life, Individual Merit Fund from Memorial University of Newfoundland Students’ Union, Medical Student Oration Award from the Newfoundland and Labrador College of Family Physicians, Gerald F. Lynch Memorial Scholarship from Newfoundland and Labrador Medical Association, and many more.

Dr. Grant graduated from Memorial University’s School of Pharmacy in 2012 and worked full-time as a community pharmacist for two years before returning to Memorial to pursue medicine. “I’m proud of my background in pharmacy, and it will continue to influence my career as a physician. During medical school, I’ve attempted to blend my two careers through projects like developing an online module to teach students the skills of prescription writing.”

In his letter of support for Dr. Grant, Dr. Jim Connor, John Clinch professor of medical humanities and history of medicine, noted “Chris is a solid guy: he is professional. He gets the job done in a measured way and delivers whatever is required.

In July 2018, Dr. Grant started his residency in internal medicine here at Memorial. He’s considering a subspecialty fellowship in respiratory medicine.

The CMA celebrated its 150th anniversary in 2017. As part of the celebrations, CMA and CMA Foundation created the CMA 150th Anniversary Bursaries and Awards program. The award is granted to a full-time MD student at Memorial who demonstrates an ability to exemplify the values of professionalism including honesty and integrity, respect, responsibility and accountability, commitment to self-improvement and collaboration. Over five years, the CMA Foundation will also grant an $8,500 bursary. Memorial’s Dr. Adam Comerford received the first bursary.

“The CMA Foundation is proud to assist and support the next generation of physicians,” states Allison Seymour, president, CMA Foundation. “This investment is a key legacy initiative we know will contribute to a strong and meaningful future for the medical community.”

#MUNMEDDonorPride
On the fourth floor of the Faculty of Medicine is an open space with modern desks, a hospital bed and a white board covered in ideas. It’s all part of the space occupied by Bounce.

**Bounce Health Innovation** (Bounce, for short) is a connector. It officially launched in April of this year to help the emerging medical technology sector in Newfoundland and Labrador.

A team of six part-time and one full-time person, they work with individuals, companies and organizations to support and they grow health innovation. They’ll meet with anyone who has an idea or business that involves health and they provide support for things such as clinical connections, business start-up, business growth, mechanical engineering, product design, software development or medical devices.

Their goal is to support the creation of new medical technology companies. They provide support in idea validation, market identification, prototyping, and more to anyone who wants to solve a health-related problem. And they run events such as Hacking Health Cafes, Hackathons, ideation workshops, pitch events and more.

Bounce hosted the first Hacking Health Western NL Café at Memorial’s Grenfell Campus in Corner Brook as well as an event for students at Exploits Valley High School in Grand Falls-Windsor recently.

“The entire focus was on creating a safe space where people could openly discuss the challenges with reckless abandon,” said Dr. Andrew Smith, co-creator of Bounce and associate professor of family medicine. “The neat thing is you have a patient sitting next to the CEO of Eastern Health sitting next to an engineer sitting next to a doctor or nurse. Everybody is an equal and driven to solve the next challenge.”

So far, the small but mighty team has employed entrepreneurial work term students (multiple per term, including seven this fall); received an Embryo Grant; facilitated a clinical job shadowing program for students to expose them to the health care system; and worked with Eastern Health on innovation initiatives.

They also work with 10-12 companies at any given time.

Bounce is funded by the Government of Canada which invested in the [Newfoundland and Labrador Association of Technology Industries’ (NATI) work](https://natinnovate.com/) to establish an innovation and entrepreneurship network within the province’s health-care sector. The investment was made through ACOA’s [Business Development Program](https://acoa.gob.nf.ca/). Other Bounce partners include Memorial University, Government of Newfoundland and Labrador’s Department of Health and Community Services and Department of Tourism, Culture, Industry and Innovation, regional health authorities, and the NL Centre for Health Information.
AWARDS AND HONOURS

Guangju Zhai received the 2017 President’s Award for Outstanding Research for his significant contributions to the world-wide medical community as a genetic epidemiologist; his seminal discoveries focused on the study and treatment of osteoarthritis; and his excellent reputation for knowledge translation.

**Dr. Zhai**, professor, Discipline of Genetics, focuses his research on identifying novel genetic and metabolic markers for predicting disease risk and progression as well as discovering targets for the development of new treatments and medications for osteoarthritis. He established the Newfoundland Osteoarthritis Study which aims to create a biobank of human joint tissues.

Barbara Morrissey received the 2017 President’s Award for Exemplary Service. According to her citation, Ms. Morrissey has been an integral part of the Discipline of Family Medicine since 2005. As the clinical operations manager, her knowledge of the discipline enables her to provide direction and support to faculty, staff and students. The President’s Awards for Exemplary Service, is presented to employees who have demonstrated outstanding service and/or who have made significant contributions to the university community beyond that normally expected for their positions.

**Dr. Michael Grant**, professor of immunology, Division of BioMedical Sciences, was awarded the 2018 Bernhard Cinader Award from the Canadian Society for Immunology. The Bernhard Cinader Award is awarded to an immunologist working in Canada who is an exceptional researcher and also has something extra such as teaching, art, outreach, writing, etc. Dr. Grant’s award presentation was entitled *Edge to edge, look straight ahead.*

His research focuses on the immunology of chronic viral infection with a focus on human immunodeficiency virus, hepatitis C virus and cytomegalovirus; viruses that have complex relationships with the immune system and a negative impact on human health. The ultimate goal of his research is to develop immune-based strategies that slow the onset of immune senescence and limit the need for antiviral drugs.

**Drs. Leslie and James Rourke** have been announced as co-5-Star Doctors with the World Organization of Family Doctors (WONCA) for North America. As family physicians, Drs. James and Leslie Rourke have made significant contributions to the discipline for over 35 years. Both exemplify the five pillars of the WONCA 5-Star Doctor, through their individual accomplishments and their collaborative work with one another. WONCA is the world organization of national family doctor organizations. Each of the seven WONCA regions can name one 5-Star Doctor each year.

**Dr. Falah Maroun** received the Order of Newfoundland and Labrador in January 2018. Dr. Maroun was honoured for his work in the field of neuroscience, a division which he led for almost 40 years. For a long time, Dr. Maroun, who arrived in this province in 1967 from Lebanon, was the only neuroscientist in Newfoundland and Labrador. He was chief of the Division of Neurosurgery in St. John’s from 1968 to 2007 and has been actively involved in
clinical practice and teaching at the faculty. He was also professor and chairman of the Discipline of Surgery from 1989 to 1999.

Dr. Christopher Kovacs was named the 2018 Dr. Harvey Guyda Educator of the Year from the Canadian Society of Endocrinology and Metabolism. This award is given to an individual who has demonstrated excellence in teaching or who has made a significant contribution to the teaching of endocrinology.

Dr. Norah Duggan, Discipline of Family Medicine, was named the 2018-2019 family physician of the year by the NL College of Family Physicians. Called the Reg L. Perkins Award, it recognizes family physicians who exemplify the best of what being a family doctor is all about.

Julia Ludlow Corcoran, development associate at the Faculty of Medicine, has been named the Outstanding Fundraising Professional Rising Star by the Association of Fundraising Professionals, NL chapter. The award was given on Nov. 15 at a National Philanthropy Day celebration.

DEAN RECEIVES HIGH ACADEMIC HONOUR

Dr. Margaret Steele, dean of the Faculty of Medicine, has been elected as a Fellow of the Canadian Academy of Health Sciences (CAHS).

Induction into the CAHS as a Fellow is considered one of the highest honours within Canada’s academic community. CAHS Fellows, who serve as unpaid volunteers, are nominated by their institutions and peers and selected in a competitive process based on their internationally recognized leadership, academic performance, scientific creativity and willingness to serve.

Fellows are expected to be active in promoting improved health, health care and health-related policies, the latter criterion is particularly important in the nomination process. Selection places considerable emphasis on internationally recognized leadership and contributions that have meaningfully advanced the academic health sciences, health care, health policy or related impacts.

CAHS brings together Canada’s top-ranked health and biomedical scientists and scholars to make a positive impact on the urgent health concerns of Canadians.

The CAHS Fellowship was presented at the 2018 Forum and Annual General Meeting in Vancouver, British Columbia on Sept. 13.
2018 STUDENT CELEBRATIONS

CONVOCATION

SHINGLES
WHITE COAT CEREMONY

The class of 2022 were presented with their white coats during a special ceremony on September 21, 2018 at the Faculty of Medicine. Family and friends gathered to watch the future doctors get coated and hear them recite the Declaration of Geneva.

“The Declaration was a very empowering moment. Reading along with my classmates made the process, the ceremony, and the white coat a very surreal event! My favourite line was (and still is): ‘I solemnly pledge to dedicate my life to the service of humanity’. I think that is one line in particular that carries weight and meaning, and motivates many students to enter the profession in the first place.”

~ Logan Slade, Class of 2022