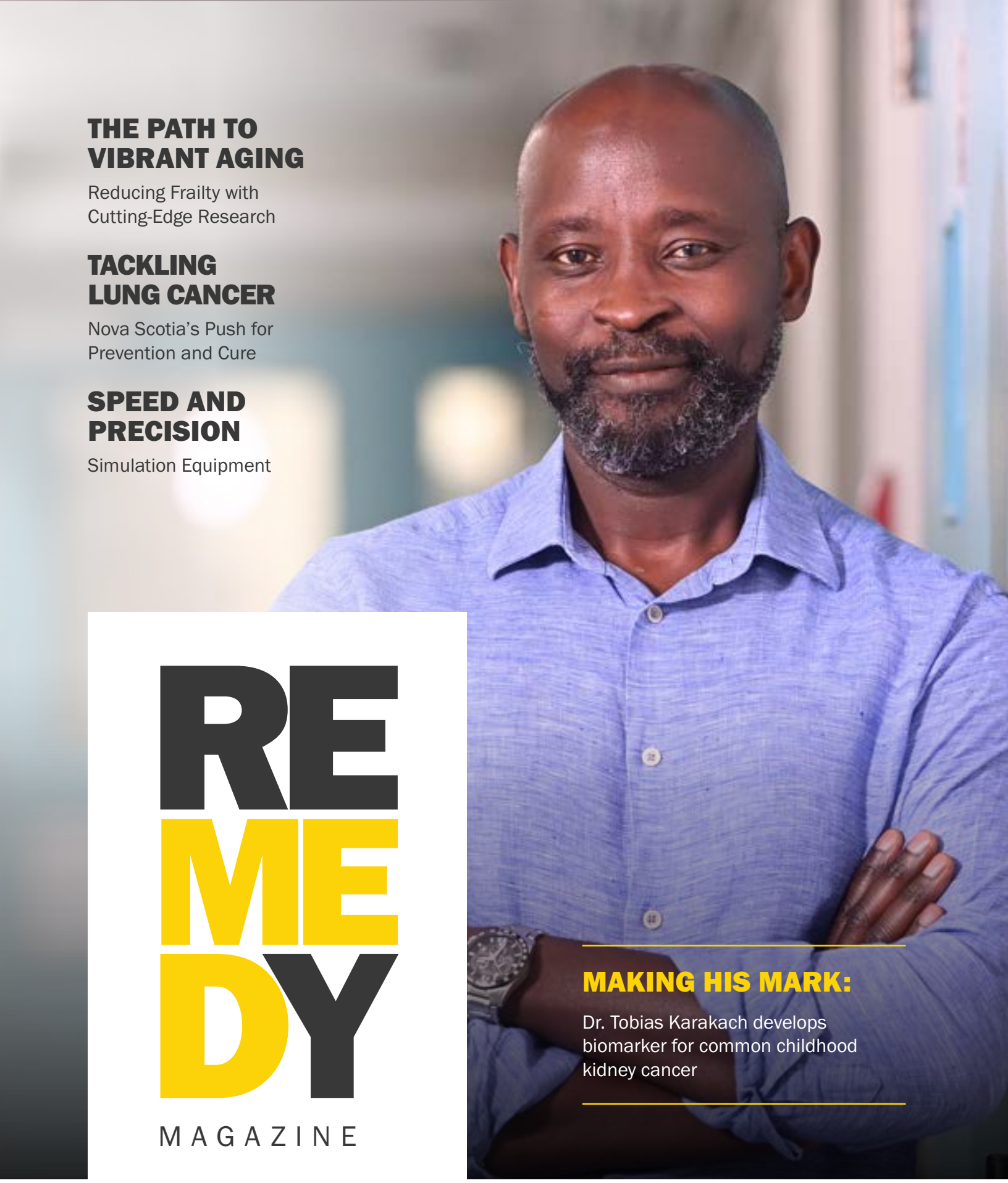

THE PATH TO VIBRANT AGING

Reducing Frailty with Cutting-Edge Research

TACKLING LUNG CANCER

Nova Scotia's Push for Prevention and Cure

SPEED AND PRECISION

Simulation Equipment

REMEDY

MAGAZINE

MAKING HIS MARK:

Dr. Tobias Karakach develops biomarker for common childhood kidney cancer

DALHOUSIE UNIVERSITY | FACULTY OF MEDICINE

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REMEDY

MAGAZINE

FALL/WINTER 2024

Photo by Jaron Nix on Unsplash

Dalhousie University is located in Mi'kma'ki, the ancestral and unceded territory of the Mi'kmaq. We are all Treaty people.

We recognize that African Nova Scotians are a distinct people whose histories, legacies and contributions have enriched that part of Mi'kma'ki known as Nova Scotia for over 400 years.

DALHOUSIE UNIVERSITY | FACULTY OF MEDICINE

PLEASE SEND NEWS, STORY IDEAS, COMMENTS, AND/OR ADDRESS CHANGES TO:

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FEATURES & STORIES

A MESSAGE FROM THE DEAN

In our pursuit of creating healthier communities, we cannot overstate the role of philanthropy. As Dean, I am deeply moved by the passion and commitment of our donors who believe in the power of health research and education to change lives. Your contributions are more than just financial support—they are a testament to your belief in the potential of human ingenuity and compassion.

This edition of REMEDY highlights the transformative impact of your generosity. Through your support, we are not only advancing medical knowledge but also addressing the urgent health needs of our society. Whether it's through funding innovative research, supporting the education of future health-care leaders, or enabling new community health initiatives, your partnership is at the heart of our success.

Together, we are building a future where every individual has the opportunity to live a healthier life. On behalf of the Faculty of Medicine, I extend my deepest gratitude for your continued trust and support.

Kindest regards,

David R Anderson

DR. DAVID ANDERSON
Dean, Faculty of Medicine

MESSAGE FROM DR. EILEEN DENOVAN-WRIGHT

In the world of medical research, progress is driven by curiosity, collaboration, and above all, the steadfast support of our community. As the Associate Dean of Research, I am honoured to work alongside our talented researchers, whose groundbreaking work is made possible by your generous contributions.

The stories featured in this issue of REMEDY are a testament to what we can achieve when we come together with a shared purpose. Your support fuels the discovery of new knowledge, the development of innovative therapies, and the translation of research into real-world solutions that improve lives. It's a partnership that goes beyond funding—it's a collaboration that empowers our researchers to dream big and tackle the most challenging health issues of our time.

Thank you for being an essential part of our research community. Your dedication not only advances science but also brings hope and healing to countless individuals and families. Together, we are shaping the future of health and well-being.

With sincere appreciation,

E Denovan-Wright

DR. EILEEN DENOVAN-WRIGHT
Associate Dean Research, Faculty of Medicine

MAKING HIS MARK

DAL RESEARCHER DEVELOPS BIOMARKER FOR COMMON CHILDHOOD KIDNEY CANCER

By Laura Eggertson

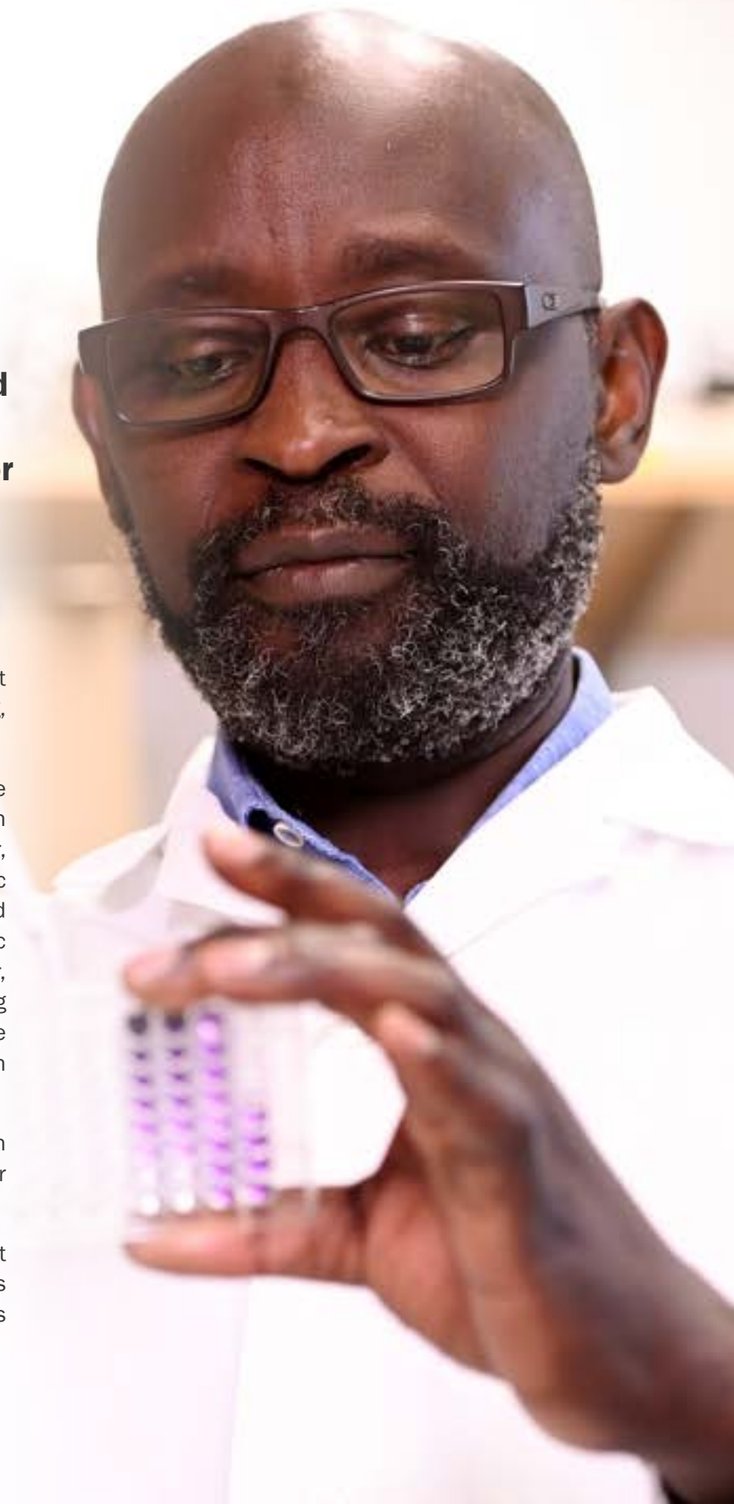
Canon Beazley had already finished his treatment, following surgery and 10 months of chemotherapy for a childhood kidney cancer called Wilm's tumor, when the then-12-year-old's panic attacks began.

The first time, he was in the dressing room at a hockey tournament. He started sweating, his heart raced, and he felt shaky.

"It was pretty much a year to the date of the first investigations of the stomach pain," remembers Canon's mother, Shelly Malcolm Beazley. When the panic attacks continued, the Beazleys realized Canon was experiencing Post-Traumatic Stress Disorder (PTSD). The anxiety-related disorder, coupled with inflammatory bowel issues, are among the long-term complications that can result from the traumatic and aggressive treatments children with Wilm's tumor often undergo.

Those long-term effects are the reason Dr. Tobias Karakach is investigating a way to personalize the treatment for children with Wilm's tumors.

Dr. Karakach, an assistant professor in Pharmacology at Dalhousie's Faculty of Medicine, uses computer models to identify patterns in data from a large set of Wilm's tumor samples.



IDENTIFIED GENE

His analysis has now identified a gene which, when mutated in a Wilm's tumor, makes it more likely this childhood cancer will recur.

Now, Dr. Karakach's goal is to validate this potential biomarker, so doctors could use it to distinguish hard-to-treat tumors that require aggressive treatment, from tumors that are unlikely to recur. "Every patient would have to have their tumors (genetically) screened," Dr. Karakach says.

Then, if gene sequencing identified the mutated gene, those children would need what he calls the "sledgehammer" approach to treatment: surgical removal of their kidney followed by the most powerful chemotherapy available, to make sure the cancer would not recur.

Doctors could spare other children, whose tumors did not express the mutated gene, from the harshest forms of chemotherapy, or prescribe it for shorter periods of time, along with yearly gene sequencing.

"Our studies are showing that many of these cancers actually don't need that kind of severe, very escalated treatment," Dr. Karakach says.

Doctors could then follow those children closely, but could spare them the more lengthy and traumatic treatments – like those Canon experienced.

Because Wilm's tumors normally occur in children even younger than Canon, once they are cancer-free they still have a lifetime of contact with the health-care system to undergo, Dr. Karakach says. That's because they deal with the effects of chemotherapy, including neurocognitive and mental health disorders, decreased kidney function, developmental disorders, and cardiovascular issues, as well as the social and educational issues that result from missed time at school and contact with friends.

LASTING CHEMO EFFECTS

"When you talk about children's cancers, it leaves me heartbroken," says Dr. Karakach, who imagines how aggressive chemotherapy would affect his own two children. "There are lasting effects that people don't think about."

In addition to providing a road map for personalized treatment of patients with Wilm's tumors, the gene Dr. Karakach has identified is also a potential target for a new drug or therapy to regulate it so the tumor does not recur. And the same gene, when mutated, may become a biomarker for other cancers as well.

Canon Beazley, now 14, was fortunate enough to be able to receive trauma-based cognitive behavioural therapy. The treatment has stopped his panic attacks and other PTSD symptoms, and led him to speak publicly about the challenges that follow cancer therapy and the benefits of counselling.

Canon's mother is a fervent supporter of Dr. Karakach's research, in hopes it will prevent other families from undergoing the aggressive chemotherapy journey Canon endured. "I do believe with further research, maybe he wouldn't have had to have chemo at all," Shelly Malcolm Beazley says.

"If they can lessen the severity of the treatment and also add to your comfort level that when you are out of the woods, the cancer is not going to return—that's huge. Because a huge part of the suffering is the follow-up treatment, the chemotherapy, but also the anxiety of how likely this thing is to return or show up elsewhere."

He's doing spectacular now, his mother says, describing Canon as "super resilient."

Philanthropic donations are critical to moving Dr. Karakach's research into Wilm's tumors forward. Although this is the most common type of childhood kidney cancer, it's still rare, with only about 20 children diagnosed in Canada every year.

The rarity of the disease means large pharmaceutical companies are not eager to invest in research on Wilm's because there are not enough potential recipients of any drug or screening tool they develop to recoup their investment, Karakach says.

"Donor money is very important," he says.

Philanthropic support is also critical from Shelly Malcolm Beazley's perspective, if it enables Dr. Karakach to deliver this critical biomarker that can save children and families from additional suffering.

"Anything that can inform treatment and decrease the severity of chemotherapy is priceless," she says.

Canon Beazley and his family near the start of Canon's treatment.

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FOR HEALTH RESEARCH

MOLLY APPEAL 2024

UNLOCKING TOMORROW'S ADDICTION AND MENTAL HEALTH TREATMENTS TODAY

By Laura Eggertson

Did you know one of the reasons mental illness and addiction are hard to treat is because we don't fully understand how the brain works? In any given year, one in five people in Canada will experience a mental health problem or illness.

By age 40, half of us will have, or have had, a mental illness. And about six per cent of Canadians have a substance use disorder, including an addiction to alcohol or drugs. Often, people over-use substances to cope with their poor mental health or illness, untreated trauma, and pain or with challenging thoughts and emotions.

There are many reasons it's hard for people to find a drug or another treatment that stops relapses into substance use or prevents mental illness from recurring. One of the reasons is that we don't yet fully understand how the brain works, and how it reacts to information from our environment, and from our genetics.

At Dalhousie University, Dr. Corey Baimel is a neuroscientist at the Brain Repair Centre. He's studying the ways parts of the brain communicate with each other. He's focusing on the circuits in the brain that motivate behaviour.

Once Dr. Baimel and his colleagues learn how the healthy brain works, they can better understand what goes wrong in these circuits and cells during mental illness and substance use disorders.

"A lot of these diseases have overlapping systems, and people often suffer from many of them at the same time," Dr. Baimel says. "There are a lot of underlying causes. We've spent a lot of time researching genetics or environmental factors, and in most cases it's a combination of the two."

Understanding these processes in the brain would create new targets for drugs or other treatments.

"The more we understand about the brain, the more we're going to be able to find out ways to treat all of these diseases," he says. "What we're lacking is a fundamental understanding of the brain itself. It's the most complex thing we are aware of on the planet."

RENEWED HOPE: SYDNEY'S PATH TO A NEW BEGINNING

Sydney Gordon was just 8 years old when she started smoking the marijuana she got from the older boys who lived across the street.

In addition to a traumatic childhood, she struggled with attention deficit hyperactivity disorder (ADHD) without receiving any medication or help. "I spent my whole life being punished for being weird and lazy and not thinking the same as other people," she says.

Dr. Corey Baimel and graduate student Tanzima Fariha

Buying marijuana led to Dilaudid, a powerful painkiller—and at 18, Sydney was hooked on opiates. Using the drugs was her attempt to self-medicate, and to cope with the pain of abusive relationships.

When Sydney did withdraw from opiates, she replaced them with cocaine and alcohol, in a painful cycle that left her bouncing from one unhealthy relationship to the next. "I feel like that was my first addiction," she says. "I had no idea how to get in a healthy relationship."

At 27, while she was living in a shelter in Bridgewater, N.S., Sydney met a doctor who helped her end the addiction cycles.

Dr. David Martel is the Physician Lead, Addiction Medicine with Nova Scotia Health's Mental Health and Addictions Program. Dr. Martel helped Sydney wean off opioids, using first methadone and then suboxone—both approved medical substitutes to opioids.

Building knowledge about how the brain is involved in addictive behaviours and in mental illness disorders is critical if we are to reduce stigma and understand that the way we behave is not only a matter of willpower. Mental illnesses and addictions are diseases just like any other.

“If we have a better understanding of what’s actually happening, we’re less judgmental,” Dr. Martell says. “We think less that this is about morality and bad choices, and instead understand it is part of being human, and that behaviour is complicated.”

“I never used opioids again after that,” Sydney says.

For the next six years, Sydney was sober. She had a son, Harry, got a job, and spoke at conferences, alongside Dr. Martel, about her recovery. “I really wanted it, and I really worked hard at it,” she says. A car accident that gave Sydney a concussion triggered a relapse, however.

When her cocaine use began to affect Sydney’s relationship with her son Harry, she knew it was time to get more help. The crisis came when she missed taking Harry out for Halloween, because she was too impaired to drive safely to his dad’s to meet him. Sydney realized her drug dependence could cost her the person who mattered to her the most.

With Dr. Martel and his team’s assistance, she returned to recovery, motivated by her desire to be the best mother she could be for Harry.

A FRESH START

Today, Sydney has been sober for 18 months and has finished her suboxone treatment. She begins her Bachelor of Social Work program at Dalhousie in September 2024.

Sydney hopes medical research like Dr. Corey Baimel’s studies of the circuits and cells in the brain that motivate behaviour will reduce the stigma that labels people with addictions “bad” or “weak”.

“I’m so grateful for my life and everything I have,” Sydney says. “My worst day now is better than any of my best days in those years of addiction.”

UNLOCKING THE COMPLEXITIES OF ADDICTION

Dr. Martell believes Dr. Corey Baimel’s research shows impact and promise. “A lot of factors influence the way we behave, but some of the things we do to ourselves and to the people around us help, and some of the things we do don’t help. Examining what’s the difference between the two, that’s at the heart of what this researcher is doing.”

Having a more nuanced understanding of why people develop substance use and mental illness disorders depends on research that unlocks the complexity of our behaviour, he adds.

“We have antiquated notions about what it is to have an addiction. That people living with addiction lack willpower and have low moral standing are not just simplistic and stigmatizing attitudes, they are also untrue.”

Dr. Martel continues to practise addiction medicine as part of a team at the Recovery Support Centre in Lunenburg, and at Opioid Recovery Program clinics in Chester, Bridgewater, and New Germany, on Nova Scotia’s South Shore.

Research is critical to treating substance use and mental health disorders because there is not enough information about just how the brain is involved, Dr. Martell says.

“We have very little to guide what we do, trying to help people with substance use and mental health issues, because very little science has been done,” he says. “Supporting research to understand some of the very basic things that happen in a person’s brain will lead us to know what we can do better.”

“We need to support this kind of research because these issues affect all of us,” he says.

“Try to find someone whose family doesn’t include a family member, a friend, who is affected by a mental health disorder. You can’t. It’s pretty universal.”

- DR. DAVID MARTELL

Sydney Gordon and Dr. David Martell

SUPPORTING BREAK-THROUGH RESEARCH

A DONOR'S STORY

By Laura Eggertson

When doctors diagnosed Bonnie Salsman's husband with pancreatic cancer, the couple searched for treatment to alleviate his suffering and prolong his life.

Bonnie and Rick Salsman

"It's a disease where you struggle to find hope, because the diagnosis is so dire," Bonnie Salsman says. "There's a lot of suffering with pancreatic cancer, at least there was in his case."

Although the couple travelled to Boston for advanced radiation treatment that Bonnie believes helped Rick live for 18 months, his treatment did not improve his quality of life drastically.

"He didn't get a lot of really comfortable days in that period," she says. One of the brief periods of time when Rick's pain was manageable coincided with the birth of their grandson, Théo.

"We were able to have that joy and that period of time as a family," she says. Before Rick died at 68, he made it clear to Bonnie he wanted her to donate money to research for pancreatic cancer.

So, in 2021, and again in 2023, Bonnie donated to Dalhousie's Faculty of Medicine to the research Dr. Jeanette Boudreau and her team are conducting into a type of white blood cells called natural killer cells.

Natural killer cells, or NK cells, are important players in the body's immune system. They already work to kill cancerous cells, viruses, or bacteria, although sometimes cancer cells are able to evade them.

IDENTIFYING GENETIC MUTATIONS

Dr. Boudreau and her graduate students and post-doctoral fellows are developing ways to aim these impressive defenders at specific cancer cells, such as those populating pancreatic cancer tumours.

They're also analyzing samples from the tumours of people in Atlantic Canada who have had surgery for pancreatic cancer, to identify which genetic mutations exist in their cancers and match those mutations to existing drugs or new drugs in clinical trials. Making those matches could provide new treatment avenues for people with pancreatic cancer, like Rick.

When deciding what type of research to support, a desire to help fund something that would make a real difference motivated Bonnie. Her first donation financed a studentship, to support one of Boudreau's graduate students, who conduct the experiments driving the advances the lab is making.

"After you experience the devastation that various types of cancers cause, you realize how important it is to support the people who are looking for ways to help."

- BONNIE SALSMAN

Dr. Jeanette Boudreau

"If you look at how some of most spectacular breakthroughs in cancer have happened, it is in the type of research Dr. Boudreau and her colleagues are doing," says Bonnie.

"They're not driven by how much money this is going to make. They're driven, truly, by just trying to help humanity." Bonnie has a simple message to others who might be thinking about giving to cancer research.

She's thankful that Rick, a retail entrepreneur and an adventurer who was able to retire early, had the chance to achieve one of his life-long goals. In 2007, he and Bonnie, with help from family and friends, sailed their boat Aisling 1 across the Atlantic. Bonnie hopes her donation will help others get the chance to achieve their goals.

"I worked in hospital pharmacy for a lot of my career, and I have had a chance to see some of the things that have been game-changers. I know it's possible," she says.

THE PATH TO VIBRANT AGING

BREAKTHROUGH BREAKFAST
DALHOUSIE UNIVERSITY

TACKLING FRAILTY WITH CUTTING-EDGE RESEARCH

By Dayna Park

Did you know that every month, 700 Nova Scotians reach the age of 65? According to the Government of Nova Scotia, our rising aging population currently stands at about 131,000 people. This number is projected to nearly double by 2026, signaling a significant demographic shift that will influence every aspect of our society.

As the region with the highest percentage of people aged 65 and older in Canada, the quality of life for our seniors is profoundly impacted by chronic illnesses such as dementia, which are strongly linked to frailty.

Frailty, an age-related condition, is a significant concern in older adults. It makes it difficult for those suffering to recover from illness and accidents, and increases the risk of falls, delirium, hospitalization, and death.

At Dalhousie University's Faculty of Medicine, our world-leading researchers are at the forefront of tackling the challenges of aging. Their work focuses on preventing illness, improving treatments, and shaping policies that will help us all age better and contribute longer to our communities.

FEATURED AT BREAKTHROUGH BREAKFAST

This vital area of research is the focus of the Faculty's September 2024 Breakthrough Breakfast Series event. Designed to celebrate groundbreaking research and medical innovation, the Breakthrough Breakfast Series showcases different areas of medical discovery, featuring esteemed researchers at the forefront of their fields.

From cardiac research to cancer, immunity and vaccinology, neurosciences & brain diseases (including mental health and Alzheimer's disease), to healthy aging and frailty, the series spans a diverse spectrum of crucial medical topics. Each event includes researchers, graduate students, patients, or community members who have contributed to or benefited from this research.

The next Breakthrough Breakfast is January 8th, 2025 - stay tuned for more info!

MEET SOME OF THE RESEARCHERS AT DALHOUSIE WHO ARE EXPLORING INNOVATIVE SOLUTIONS AND STRATEGIES TO ENHANCE THE HEALTH AND WELL-BEING OF OUR AGING POPULATION.

DR. SUSAN HOWLETT

PROFESSOR OF PHARMACOLOGY AND GERIATRIC MEDICINE

Dr. Susan Howlett is a Professor of Pharmacology and Geriatric Medicine at Dalhousie University. She has discovered profound differences in male and female heart cell function, how these change with age, and how sex hormones regulate these processes. Her lab has pioneered the measurement of frailty with a novel "frailty index" (FI) tool based on deficit accumulation.

Her work shows that the level of frailty rather than age alone is a better tool to grade maladaptive, age-dependent changes in heart structure and function. A translational scientist, she has used results from animal studies to develop a new tool based on lab results (the FI-Lab) to measure frailty in people.

DR. KENNETH ROCKWOOD

PROFESSOR OF GERIATRIC MEDICINE & NEUROLOGY

Dr. Kenneth Rockwood is a Professor of Medicine (Geriatric Medicine & Neurology) and a Clinical Research Professor of Frailty & Aging at Dalhousie University. He has leadership roles in many studies of frailty and dementia, in Canada and around the world. Since 1991, Dr. Rockwood has been a staff physician at Nova Scotia Health and since 2021, Senior Medical Director of Nova Scotia Health's Frailty & Elder Care Network.

In 2021 Ken received the Ryman Prize, which the Prime Minister of New Zealand awards for the best work carried out anywhere that has enhanced quality of life for older people. Several honours have followed, the most recent being named as an Officer of the Order of Canada. This is recognized in his home province as being "not too shabby for a Newfoundlander".

DR. PAMELA JARRETT

ASSOCIATE PROFESSOR OF GERIATRIC MEDICINE

Dr. Pamela Jarrett is a geriatrician with Horizon Health Network in Saint John, New Brunswick, and an Associate Professor of Medicine at Dalhousie University. A Dalhousie Medical School graduate, she has practiced geriatric medicine since 1994, contributing to clinical care, administration, teaching, and research. Her work focuses on improving the lives of older adults, particularly those living with dementia, through prevention, management, education, and caregiver support.

Dr. Jarrett leads research initiatives on Transitions in Care of Older Adults and has been recognized with a Clinical Research Scholarship from ResearchNB and the Lieutenant Governor's Award for Excellence in Aging. In 2023, she was appointed to the Canadian Ministerial Advisory Board on Dementia, highlighting her dedication to enhancing care for older adults in New Brunswick and beyond.

REMEDY

AWARD ENCOURAGES MD GRADS TO CHOOSE A CAREER IN FAMILY MEDICINE

MEET THE AWARDEES

By Jodi Reid

Dr. Nick Ellingwood (MD'24) (center) is presented with the James Walker Wood, MD, Award by Dr. Kate Wood (PGM'12) and Dean David Anderson (MD'83).

After largely self-funding his undergraduate and medical school studies, Dr. Nick Ellingwood (MD'24) says he was emotional when he discovered he had been chosen as an inaugural recipient of the James Walker Wood, MD, Award in Medicine.

"Obviously it was due to the financial aspect," he explains. "But it was also because the award recognizes students who graduate from Dal and decide to stay within Dal and within the Maritime provinces to do their residency. I think, often times, rural physicians get overlooked. It's really nice to see this award investing in the rural family physicians of tomorrow."

Starting in 2024, every year a pair of graduating MD students will each receive the James Walker Wood, MD, Award in Medicine valued at $100,000—the largest ever individual prize for MD graduates at Dalhousie's Faculty of Medicine. To qualify for the award, which was made possible by a $1.2 million gift from the Walker Wood Foundation, recipients must be entering a Family Medicine Residency at Dalhousie serving in rural communities in the Maritimes. They must also demonstrate engagement in leadership and extracurricular activities and have faced financial barriers while in pursuit of their medical degree.

RECRUITING FAMILY DOCTORS: A NATIONAL CHALLENGE

Financial concerns are a key factor deterring students from pursuing family medicine. According to a 2022 report from the Association of Faculties of Medicine of Canada, Canadian medical school graduates carry an average debt load of $90,000 into their residencies, with 12% carrying debt of over $200,000. Family physicians incur additional costs of establishing their practices and earn lower salaries than other specialties. Facing these harsh fiscal realities, many medical students feel a strong pull toward higher-paying specialties.

As a result of concerted efforts by the Faculty of Medicine and Department of Family Medicine, Dalhousie has enjoyed comparative success in matching medical learners to its family medicine residency spots. In fact, over 50 per cent of Dalhousie's MD Class of 2024 chose family medicine for their residency.

"The James Walker Wood Award is a significant step towards alleviating financial burdens, ensuring that we continue to attract and retain talented physicians in our communities," notes Dr. Katherine Stringer, Head of Dalhousie's Department of Family Medicine. "We are profoundly grateful for the Foundation's enduring support—it will be a tremendous help in our efforts to promote family medicine as a sought-after career choice and it reinforces the value our discipline brings to Maritime communities."

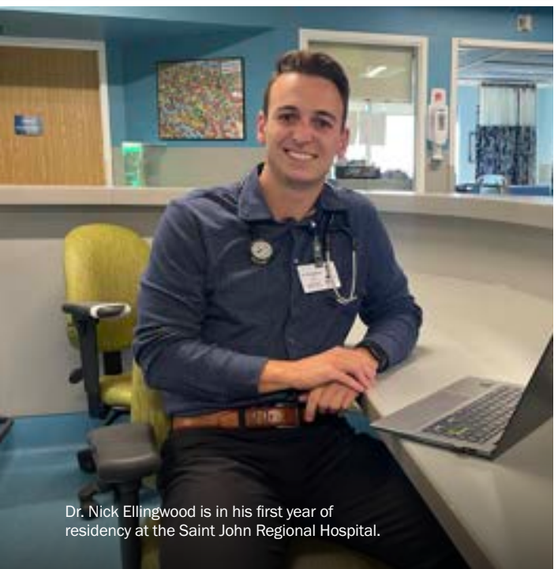
Dr. Laura Miller (MD'24) (center) received her award during the Spring 2024 Convocation.

A LEGACY OF GIVING AND A DALHOUSIE CONNECTION

The award commemorates the dedication and service of its namesake, Dr. James Walker Wood. Born in 1889 to a family of modest means in Scotland, Wood's academic excellence was recognized with a Carnegie Foundation scholarship that enabled him attend medical school. After serving in World War I, he established a family practice in a working-class area in Leeds, Yorkshire, where he provided exceptional care to the community.

Inspired by his work, Wood's son and daughter-in-law, Neil and Susan Wood, established The Walker Wood Foundation in 2006.

Dr. Laura Miller is undertaking some of her residency at the Colchester Regional Hospital.



Dr. Nick Ellingwood is in his first year of residency at the Saint John Regional Hospital.

It supports students across Canada and has provided other scholarships to Dalhousie students for over a decade.

James Walker Wood's granddaughter, Dr. Kate Wood (PGM'12), completed her family medicine residency at Dalhousie. As Vice President of the Walker Wood Foundation, she sees firsthand the difference that financial support can make.

"Given the challenges in recruiting family medicine doctors in Canada, the Walker Wood Foundation wished to increase our support and provide a gift that would be transformative for medical students aspiring to enter the practice of family medicine," she says. "Our hopes are to encourage medical students to enter family medicine as it is such a rewarding and diverse career."

REALIZING A LIFELONG DREAM

Dr. Laura Miller (BSc'16, MA'18, MD'24) always wanted to become a family physician—a dream reinforced by her experience at Dal.

"I learned going through medical school that I like a little bit of everything," she explains. "With family medicine, you get to do a little bit of everything."

Dr. Miller was thrilled to be named an inaugural recipient of the James Walker Wood, MD, Award in Medicine. "It has been a huge relief in terms of my stress and financially being able to take off a large chunk of my debt. I still can't even really comprehend or explain how much it's helped—I'm still in shock."

Buoyed by the support of the award, Drs. Miller and Ellingwood are focused on completing their residencies and achieving their career goals in rural family medicine. Originally from Quispamsis, NB, Dr. Ellingwood is in his first year of Dalhousie's three-year Integrated Family Medicine/Emergency Medicine residency, and will train in Sussex and Saint John, NB.

Dr. Miller, who is from Halifax, NS, started her residency in Dalhousie's North Nova Family Medicine Program based in Truro, NS. She is currently training at Village Family Physicians in Bible Hill and will complete hospital-based training and practice at the Colchester Regional Hospital.

NOVA SCOTIA'S HIGH RATES OF LUNG CANCER DRIVE RESEARCH ON CAUSES, PREVENTION, AND TREATMENT

By Laura Eggertson

Stephen Sollows was an active, engaged 63-year-old who had never smoked when he became one of 1000 Nova Scotians every year who receive the devastating news that they have lung cancer.

In Mr. Sollows' case, his cancer had already spread to his spine, his pelvis, his hip, and a bone in his leg before he was diagnosed.

"I've been perfectly healthy all my life," says the retired small business owner from Yarmouth, N.S. "This just came out of the blue."

Nova Scotia has the highest rate of lung cancer in the country, and the disease costs more than 700 people their lives annually. That sobering statistic makes medical research for lung cancer vital.

One of the greatest difficulties doctors currently encounter when treating lung cancer is that doctors diagnose most people only once the disease is advanced. By the time people experience symptoms, conventional treatment is often unsuccessful.

At an advanced stage, the five-year-survival rate, on average, is less than 20 percent. Those statistics are even more dire in Nova Scotia: five-year-survival rate is 14 percent. Fortunately, Mr. Sollows had a particular kind of genetic mutation in his tumours for which there was a treatment. For the last four years, since his 2020 diagnosis, he has responded to a new medication, called osimertinib. Health Canada approved the drug to treat his type of non small-cell lung cancer in 2016.

He also received radiation to his spine and ablative stereotactic radiation treatment to eradicate the cancer in his lung.

Although the treatments haven't cured Mr. Sollows, they have extended his life and allowed him to continue cycling, kayaking, hiking, and the other activities he enjoys, with little to no pain.

"Without research in cancer treatments and therapies, I simply wouldn't be here," he says. "I just feel so well, and have been so active. It gives you hope that you can have a future."

Although smoking is the primary cause of lung cancer, today, as many as 30 percent of all new lung cancer diagnoses occur in people like Mr. Sollows, who never smoked.

"We're seeing a huge rise," says Dr. Robin Urquhart, an associate professor at Dalhousie who holds the Canadian Cancer Society (Nova Scotia Division) Endowed Chair in Population Cancer Research.

Exposure to radon gas, arsenic, and air pollution are the culprits for the lung cancer diagnoses among non-smokers, Dr. Urquhart says.

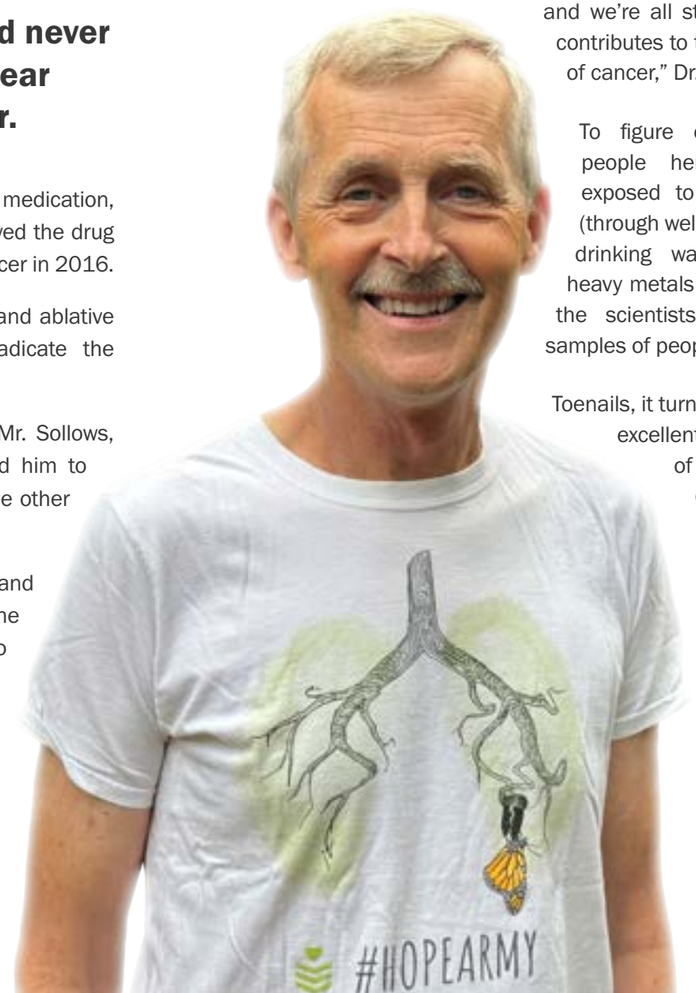
CLIMATE CHANGE RAISES RISK

Climate-driven events, such as melting permafrost that exposes more of the rocks containing radon, flooding that leaves more arsenic in drinking water supplies, and forest fires that produce more air pollution, are increasing exposure to these dangerous toxins—making the Canadian Cancer Society's Breakthrough Team's research even more urgent.

"We're studying activity patterns and we're all studying how this contributes to the development of cancer," Dr. Urquhart says.

To figure out how many people here have been exposed to radon, arsenic (through well water and other drinking water) and other heavy metals via air pollution, the scientists are collecting samples of people's toenails.

Toenails, it turns out, are an excellent storehouse of heavy metal exposure. They're easy to test, and will ultimately enable the researchers to develop a scale, so they can advise people above a certain threshold that they are of increased risk of lung cancer and should get screened.



Stephen Sollows

HOPEFUL ADVANCES

The Canadian Cancer Society study is only one of the ways Dalhousie researchers are tackling the high rates of lung cancer, though. Our scientists are also investigating the use of cell therapy against lung cancer.

Dr. Jeanette Boudreau and Dr. Dan Gaston are exploring the use of Natural Killer cells, which are members of the immune system, to trigger a targeted immune response to destroy lung cancer cells. Another Dalhousie researcher, Dr. Brent Johnston, is also studying the role of NK cells in beating this disease.

Lung cancer researchers in the United States are also studying the use of CAR-T cell therapy, another form of transplanted cell therapy that uses a patient's own re-engineered cells to super-charge the immune system and cause it to attack cancerous cells. If that therapy proves successful, the head of Nova Scotia's CAR-T program will be keen to see it approved here.

In all these lung cancer research projects, philanthropic donations are critical to move the generation of new knowledge forward, and to transform that knowledge into clinical practice and public policy.

"Lung cancer has been so under-funded for years and now there's an opportunity to see the growth in treatment that is saving lives, but also extending lives," says Mr. Sollows. "I'm living proof that you can live a very active healthy life at Stage 4."

"Research is absolutely life-giving."
- STEPHEN SOLLOWS

DAL RESEARCHER COMPLETES HER 4TH BIG RIDE FOR CANCER TREATMENT

By Laura Eggertson

When Dr. Robin Urquhart cycled 170 kilometres from Troy to Inverness along Cape Breton's Celtic Shores Coastal Trail in June, it was the fourth time the Dalhousie researcher had completed the challenging BIG RIDE to support the Beatrice Hunter Cancer Research Institute.

Dr. Urquhart, an associate professor at Dalhousie who holds the Canadian Cancer Society (Nova Scotia Division) Endowed Chair in Population Cancer Research, is also a member of the Beatrice Hunter Cancer Research Institute.

She's one of more than 50 participants in this year's BIG RIDE, a community fundraising event that GIVE TO LIVE organizes annually. GIVE TO LIVE's mission is to "inspire people to live happy and healthy lives through generosity, fitness, and achievement of the extraordinary." The BIG RIDE raises money for the Beatrice Hunter Cancer Research Institute's Cancer Research Trainee Program, providing fellowships for graduate students and post-doctoral fellows, as well as funds for summer students.

Many of the riders, who this year raised close to $160,000 for the Institute, have personal stories of living with cancer or losing someone they loved to the disease.

The BIG RIDE 2024


Dr. Robin Urquhart

Dr. Urquhart supports the BIG RIDE because both her parents died young of pancreatic cancer with little to no medical care in the tiny outport town of Westport, Newfoundland. Her parents' inability to access care is also the reason Dr. Urquhart focuses her research on equity and access to cancer care in Atlantic Canada.

"It's motivated my own research, for sure."

As the Scientific Director of the Atlantic Partnership for Tomorrow's Health (PATH), Dr. Urquhart is also one of the leaders in building a national population health study that will link lifestyle, environmental factors, and genomics in a massive new database of more than 37,000 Atlantic Canadians. She knows the value of research and the importance of the medical trainees who drive it.

She took up cycling during the pandemic after a foot injury sidelined her from running, completing two of the yearly Big Ride events by cycling from Halifax to Chester and back.

Her third BIG RIDE took place in Newfoundland's Gros Morne National Park, near the area where Dr. Urquhart grew up. That was the most challenging of all the rides she's participated in so far, she says. "I've never done anything in my life physically as hard as that. So, it wasn't so bad this year, by comparison," she says with a laugh.

The three-day event this year included a seven-kilometre or 11-kilometre hike through the Mabou highlands, sandwiched between cycling two and from Inverness. The hike was difficult in its own right, Dr. Urquhart says, but provided beautiful views of rugged Cape Breton coastline. She enjoys the ride every year because of her fellow cyclists, she says.

"The people who do it are completely 100 percent committed to the cause, because they've been somehow impacted by cancer," she says. "They are a very friendly group that takes everybody in. Some of them are really hardcore cyclists, but it doesn't matter. You still feel like you fit in, regardless."

Since participants in the BIG RIDE began supporting the Beatrice Hunter Cancer Research Institute in 2018, the money they raised has financed 22 Cancer Research Trainee Program studentships, as well as seven summer student positions.

This year, in addition to the money the cyclists raised, four children bolstered the total by $486 by setting up a lemonade stand at one of the points along the trail.

Dr. Urquhart intends to complete the BIG RIDE again next year, whether they return to Cape Breton or choose another location.

"I will probably follow them wherever they go, because the group is really excellent," she says.

THE BIG RIDE

A COMMUNITY EFFORT

By Dayna Park

In Cape Breton, the spirit of community shone brightly during this year's BIG RIDE, a fundraising cycling event for the Beatrice Hunter Cancer Research Institute. As cyclists traversed the scenic Celtic Shores Coastal Trail, they were met with heartfelt local support.


Mary Janet MacDonald

In Cape Breton, the spirit of community shone brightly during this year's BIG RIDE, a fundraising cycling event for the Beatrice Hunter Cancer Research Institute. As cyclists traversed the scenic Celtic Shores Coastal Trail, they were met with heartfelt local support.

Mary Janet MacDonald, a resident deeply moved by cancer's impact on her family, baked homemade cinnamon buns for the riders. During the COVID-19 pandemic, Mrs. MacDonald started making home cooking videos and now has an active website, Facebook page, and cookbook. She baked cinnamon rolls for all of the riders, passing them out on the trail.

Her personal connection to the cause—stemming from the loss of her mother to cervical cancer and her niece's ongoing battle with bowel cancer—drove her to offer the warm welcome as a small token of her appreciation. When she was only three years old, Mrs. MacDonald lost her mother to cervical carcinoma at the age of 37, leaving five children.

Her father was able to keep the three oldest children, aged nine, seven, and six, while Mary Janet and her baby brother, who was just two years old, went to two different family members' homes in the community.

"There are days I would like to know what my mother's voice sounded like. I hope that one day there is a cure so that no other child will have to yearn for the sound of their mother's voice." Fundraising for such a worthy cause touches Mrs. MacDonald deeply.

"This research means everything to me," she says. "I was sincerely honoured to give the riders just one little cinnamon roll to welcome them to our beautiful county and to thank them in one small way for the effort they put into this journey year after year."

Young community members also joined the effort. Local youth, Lucy VanZutphen, Dylan Campbell, Avery Campbell, and Ryan Campbell set up a lemonade stand for the Ride that raised almost $500 to support the cause.

These acts of kindness and dedication highlighted the profound impact of community solidarity in advancing cancer research and supporting those on the front lines of the fight against cancer.

Lucy VanZutphen with Dylan, Avery, and Ryan Campbell are pictured here with Big RIDE participants Laura Cormier and Alec MacNeil

TRANSFORMATIONAL GIVING

RIVER PHILIP FOUNDATION GIVES $2.5 MILLION TO DALHOUSIE MEDICAL RESEARCH PROJECTS

By Laura Eggertson

Faculty of medicine researchers will be able to test the ability of blueberries, exercise and protein to reduce frailty and improve cardiovascular health, and develop a remote pregnancy monitoring system to reduce preterm birth, thanks to a $2.5-million gift from the River Philip Foundation.

The gift established two grant programs, the Transformational Medical Research Grants, and Sustaining Excellence Grants. The Transformational grants are designed to fuel groundbreaking research on the cusp of making a significant impact for the people of this region and beyond.

The Sustaining Excellence Grants are intended to support earlier stage researchers and new research projects as they scale up to qualify for major national research grants.

In 2024 this generous investment will support two Transformational Grants and six Sustaining Excellence Grants.

“Traditionally, River Philip has supported hospitals and universities,” says Deborah Shaffner, a trustee with the family Foundation.

“This is a way to direct money more significantly to things that are important to the Foundation that could really transform medicine, rather than going to a hospital or a piece of equipment. It was an idea for us to see if we could really make a difference.”

The Bragg family established the River Philip Foundation in 2005, to support and improve the quality of life in rural communities, primarily in Atlantic Canada, and to make transformative change.

Dr. Ken Rockwood, Dr. Susan Howlett, Dr. Leah Cahill and Dr. Scott Grandy received one of the two transformational research grants of $1 million to launch their STRONG study. The year-long, randomized controlled trial will test the effects of protein, blueberries and strength training on reducing frailty and improving heart health in adults aged 65-85.

One group of trial participants will receive protein supplementation, blueberries, and strength training with a personal trainer for a year, while the second group will receive standard treatment and educational materials. The researchers will monitor all participants for changes in blood pressure, lipid profile, glucose levels, and inflammatory marker, as well as their degree of frailty, using the Canadian Frailty Index that Dr. Rockwood developed.

The team will also monitor changes in physical fitness, dietary habits, hand grip strength, and quality of life.

FRAILTY, HEART HEALTH LINKED

Frailty can lead to cardiovascular disease, and “overall frailty makes cardiovascular disease worse,” Dr. Rockwood wrote in the grant application. He hopes this study will interrupt the cycle for participants.

Previous studies have demonstrated the benefits of protein to repair muscle and improve heart health, of blueberries to lower blood pressure and oxidative stress, and of strength training to improve muscle mass and insulin sensitivity.

Dr. Ken Rockwood

Dr. Susan Howlett

Dr. Leah Cahill

None of the previous studies, however, have lasted a year and combined all three of these factors to reduce overall frailty and improve cardiovascular function, says Dr. Howlett.

“This could be a real game-changer,” she says. “It’s the idea that if you target the aging mechanisms and try to give them a fighting chance, then you are less likely to get these diseases, because your body is going to be a less hospitable place for diseases to thrive.”

The researchers will continue to track participants’ heart health and frailty for a full year after the program concludes, to analyze data for longer-term impacts.

“This is an outstanding opportunity for us to do something really great for the older adults in the province of Nova Scotia and we would never have been able to do this without the funding,” Dr. Howlett says.

“Our group is really deeply grateful for the faith and enthusiasm River Philip has shown in the project, and we will work really hard to deliver the promising results we expect to see.”

If the research teams gets the positive results they expect to see, they’d like to roll out the program to larger numbers of older adults in Nova Scotia.

“The River Philip grant will give us the opportunity to test simple lifestyle interventions that could make a real difference in improving people’s lives,”says Dr. Cahill.

PREVENTING PRETERM BIRTH

The second $1-million grant will go to Dr. Tobias Kollmann, Professor of Microbiology & Immunology and Pediatric Infectious Diseases at Dalhousie, and Dr. Nima Aghaeepour, Associate Professor and Vice- Chair for Research (Data Science) at Stanford University. They are conducting a proof-of-concept study to test remote home pregnancy monitoring.

Using wearable devices, they will create a system that would alert healthcare practitioners to potential complications such as the risk of stillbirth or preterm labour for women in rural and remote communities in Nova Scotia, PEI and New Brunswick. Often, these women do not have easy access to prenatal care.

The team will assess the results of the remote monitoring system against traditional pregnancy monitoring that involves blood sampling and other more invasive methods.

The River Philip grant is critical because it will provide the researchers with information about whether this system is feasible, Dr. Kollmann says.

If the team proves the non-invasive remote monitoring system is as reliable as more conventional, invasive monitoring at alerting health-care practitioners so they can intervene to prevent preterm births or stillbirths, this project will lead to a larger trial, he hopes

Without this first pilot, however, the larger study can't happen, Dr. Kollmann says.

"Often, that's the seed money that is lacking," he adds. "We're very grateful to the River Philip Foundation for recognizing the importance of this work and providing us with the funds to begin these investigations."

Dr. Kollmann

The researchers participated in a competitive review process to secure the awards, which the Faculty of Medicine Medical Research Development Office led. The review committee and the River Philip Foundation selected the projects based on merit and their alignment with the Foundation's priorities.

Dr. Susan Moffatt-Bruce, DalMed '94, is the President of the Lahey Hospital and Medical Center in Burlington, MA. She is an advisor on the River Philip Foundation's medical committee.

These projects have the potential to affect "patients who suffer from diseases that impact [Atlantic Canada] communities where health-care access and inequities continue to exist," Dr. Moffatt-Bruce says.

As a medical administrator and a Dalhousie graduate, she emphasizes the importance of giving back and the value of philanthropy.

"In healthcare research, resources are extremely finite, " Dr. Moffatt-Bruce says. "We are so grateful to philanthropists like the River Philip Foundation so that we can continue to make progress in medical research. Their generosity enables transformative research that leads to transformative care."

The Foundation is setting up a similar program to donate to other universities as well, based on the process developed with Dalhousie, Ms. Shaffner says.

SUSTAINING EXCELLENCE AWARDS

Three sustaining excellence awards of $85,000 each are going to:

DR. TURGAY AKAY

To study how the central nervous system processes sensory information about the body's position and movement. Lack of awareness about this body positioning can lead to falls as people age, and understanding what brain regions are involved will help to develop interventions to prevent falls and injuries.

DR. THOMAS PULINILKUNNIL

To investigate the role of a protein called TFEB in cells' ability to burn fat, and to regulate obesity that can damage the heart muscle. Learning about this protein's role will help to develop therapies to activate the protein and improve heart function in people with obesity, especially women.

DR. THOMAS NIKHIL

To study a critical enzyme involved in gut and E. coli bacteria and then to screen and test existing drugs known to block this enzyme. This research could lead to new therapies to combat Shigella Toxin E. Coli and other types of diarrheal disease.

NEW SIMULATION EQUIPMENT HELPS TRAIN DOCTORS TO REMOVE BLOOD CLOTS QUICKLY, CONFIDENTLY

By Laura Eggertson

The first time Dr. David Volders used a simulation device to practise threading a tiny catheter into people's brain arteries to remove life-threatening blood clots, he realized the experience was a game-changer.

Dr. Volders is an interventional neuroradiologist and Associate Professor at Dalhousie's Faculty of Medicine. He specializes in treating people who have strokes, caused by clots that block the blood supply to the brain. He also treats aneurysms, which occur when a weakened artery wall bulges or ruptures.

Every year, Dr. Volders and his colleagues at the QEII Hospital in Halifax perform more than 100 highly specialized procedures called endovascular thrombectomies, or EVTs.

To be successful, the doctors must be confident, and they have to be fast. To gain these skills, they need expert training—training Dr. Volders provides as director of Dalhousie's neuroradiology program.

Now, thanks to a $415,000 Mentice digital training device and software the QEII and Dalhousie are purchasing, trainees on Volders' team and across Atlantic Canada will be able to practise performing EVTs and other neurointerventional procedures in a simulated setting, with no risk to patients.

QEII FOUNDATION, DALHOUSIE PARTNER

The QEII Foundation has contributed $200,000 to the project through its $100-million We ARE campaign, and the Faculty of Medicine is contributing the remainder, in part by seeking philanthropic donations. Dalhousie will be one of only three medical schools in Canada with this top-of-the-line simulation equipment.

"We'll definitely have the best equipment in Canada for training people," Dr. Volders says.

Acquiring the Mentice device would not be possible without generous donors, say Dr. Volders and Ms. Susan Mullin, President and CEO of the QEII Foundation.

"This groundbreaking technology offers an unparalleled simulation experience, allowing our health-care teams at the QEII and beyond to practise and perfect intricate, life-saving procedures in a risk-free environment," Ms. Mullin says. "We're incredibly proud to partner with Dalhousie on this leading-edge initiative, and we're grateful for the many QEII Foundation and Dalhousie donors who are coming together to make this milestone a reality."

Donors' inspiring support will play "an instrumental role in improving patient care and training, recruiting, and retaining medicine's best and brightest care providers," Ms. Mullin adds. Acquiring this simulation training device has real clinical benefit, Dr. Volders agrees.

"There is a direct return to our patients in terms of making diagnoses and avoiding complications," he says.

An EVT is a minimally invasive procedure performed in a specialized angio suite where doctors use X-ray images to guide a catheter into the brain vessels, either from an artery in a patient's wrist or groin. To remove the brain clot, Dr. Volders then uses either suction from a catheter or a stent-retrieving device to reopen the blood vessel and restore the blood flow.

For a brain aneurysm, he uses a tiny catheter that is placed inside of the aneurysm to create a basket of metal coils to close of the aneurysm from the inside. This procedure significantly reduces the risk of future bursting. Every second counts. Every moment a clot blocks blood flow to the brain, a patient loses 2 million brain cells—causing potentially permanent brain damage and loss of function.

Previously, people learning to perform this procedure had to learn by watching someone more experienced and then by doing it themselves, under supervision, before finally operating on their own. That is an anxiety-provoking training method that can lead to mistakes, Dr. Volders says.

"There's been a tremendous advancement in our field, but what hasn't advanced at the same pace is how you train people to do these procedures," he says.

Currently, there is more than 10 percent chance that a medical trainee learning to perform EVT will cause an additional stroke or damage a patient's brain, simply because they have no other way of practising this procedure except by performing it, Dr. Volders says.

EXPERIENCE REDUCES RISK, SAVES LIVES

By contrast, experienced neuroradiologists like Dr. Volders have only a .5 percent risk of adverse events, because they have had hundreds of opportunities to hone their skills.

John Whidden is one of the patients who benefitted from Dr. Volders' experience and skill. In 2020, he had a stroke after blood clots formed in his brain and neck. Thanks to Dr. Volders' quick intervention in performing an EVT, Whidden recovered completely—and he'd like other patients to benefit from doctors trained in the latest simulation methods.

John Whidden

"This kind of simulation is going to be a lifesaver," Whidden says. "The more equipment that's available to people to increase their expertise, the better—that's wonderful."

By practising on the Mentice device, trainees, including staff members, fellows, residents, or medical students, can learn in a safe, simulated setting that feels similar to performing the actual surgery, without the pressure of learning on a patient.

"The impact on patients' lives is going to be tremendous," Dr. Volders says. "With this tool, you can train as much as you want, the more experienced you are, the fewer complications you have."

The software accompanying the machine loads actual patient brain scans for surgeons and trainees to review before they perform an EVT. Instructors can also load practice scans where supervisors like Dr. Volders can program potential complications, so the trainees learn how to respond to these emergencies. An entire health-care team can use the Mentice device to practise their roles during a surgery, or an individual can train on it. In addition, the neuroradiology group can purchase additional software to let doctors in other specialties train and practise their operations.

Dr. Volders plans to invite neuroradiologists from outside Nova Scotia, such as those in smaller centres in New Brunswick and Prince Edward Island, to come to Halifax to train on the Mentice device so they can learn to perform this delicate surgery at their own hospitals.

That training would improve the care to stroke victims outside Halifax, who often lose valuable time getting to the QEII via helicopter or ambulance.

This is one of the most effective treatments in modern medicine. The more people we can train, the more people we can treat and the more lives we can save.

- DR. VOLDERS

Dr. David Volders

UPLIFTING NOVA SCOTIA'S YOUTH

BUILDING HEALTHY FOUNDATIONS FOR STUDENTS

By Laura Eggertson

Five years after Dalhousie researchers launched a groundbreaking partnership to build healthy school communities, Nova Scotia has recognized the project's value and is funding nine new positions to enhance student engagement.

Nova Scotia Health will finance eight permanent Youth Engagement Coordinator Positions and one provincial role. These positions will support learners, schools, and communities to improve student health, learning, and leadership across Nova Scotia.

Dr. Sara Kirk

UpLift is approaching the end of its six-year-mandate. The knowledge-mobilization project harnessed $8 million of funding from the Public Health Agency of Canada and private sector donations through Dalhousie University's Office of Advancement and the QEII Foundation. Now, the partnership's impact will endure as the Youth Engagement Coordinators continue to further UpLift's mission in schools.

The UpLift Partnership is a school-community-university collaboration that supports the health and learning of school-aged children using a Health Promoting Schools approach. The project hired youth Engagement Coordinators within six school regions and worked with student action teams to create change in their school communities to promote health.

Student teams received $5000 to create and deliver projects that promote healthy, vibrant, caring and connected school communities. UpLift, which builds on principles outlined in the province's Health Promoting Schools model, instills the foundations of healthy living in children, to prevent and reduce the incidence of chronic diseases such as obesity, diabetes, and heart disease.

Supported by UpLift funding, students across Nova Scotia created outdoor classrooms, play areas, a tranquility garden, smoothie bars, a salad bar, and an indoor/outdoor garden, as well as added play equipment and bought bikes, among their 165 projects, reaching more than 54,000 students.

By empowering students to make changes in their schools and communities, UpLift has fostered teamwork, leadership, and advocacy skills, as well as creating lifelong healthy habits for better health.

"Creating healthier environments for children is a huge passion of mine," says Dr. Sara Kirk, a professor of Health Promotion at Dalhousie and the co-lead of UpLift.

"It's about giving young people agency in thinking about how their school should be, and really understanding the principles and values of a healthy school community."

HEALTHY SCHOOLS IMPROVE LEARNING

Dr. Kirk and her colleagues based UpLift on more than 15 years of research (including her own), which demonstrates that health-promoting environments in schools help students concentrate more and learn better.

For example, some of Dr. Kirk's earlier research assessed the academic performances of students in grades 4-6 at 18 Nova Scotia schools. Students with unhealthy lifestyles were more likely to have poor academic performance in English and Math, compared to students with healthy lifestyles, she and her colleagues found. They looked at diet quality, physical activity, sugar-sweetened beverage consumption, breakfast skipping, not being physically active at morning recess, and not being physically active after school – all examples of issues the students' UpLift projects addressed.

A SAFE AND HEALTHY FUTURE

Healthy school environments also deliver long-term outcomes as children grow, says Dr. Kirk, although she would need further research funding to follow the children participating in these UpLift projects over the long-term.

The new positions are an example of the sustainability researchers often hope their projects will achieve, once their research demonstrates the value of applying the knowledge they generate.

"Over the past six years, we've made significant progress in advancing Health Promoting Schools across the province," says Dr. Kirk.

"With the continued funding for these positions, we are investing in the well-being of our students, and laying the groundwork for healthier communities."

Dr. Kirk and Dr. Camille Hancock Friesen, a pediatric cardiac surgeon at the University of Nebraska and the other lead in the UpLift Partnership, launched it in 2018. UpLift received funding from the Public Health Agency of Canada, the Dalhousie Medical Research Foundation (now merged with the Faculty of Medicine), the QEII Foundation, and the Aberdeen Health Foundation.

Although UpLift's long-term health benefits for the children participating in the project will take years to realize, the short-term benefits are evident quickly, Cameron Ure, one of the current Youth Engagement Coordinators, says in a video UpLift made to report its results.

"We've had kids coming into the UpLift program feeling a little bit of hesitancy and maybe not necessarily identifying as a leader, and just within the two months' of going through the project ... they've totally shifted that mindset, and they are seeing themselves as leaders and change-makers in their school, which is huge for such a short period of time."

One student at New Glasgow Academy captured that same sentiment when asked what she liked about working on the UpLift project she participated in.

"My favourite part of working on my UpLift project was the friends I made and the pride I felt about how I was able to be in a safe environment," she said.

Photo by Kenny Eliason on Unsplash

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CAROL MURRAY
Carol.murray@dal.ca
902-233-8767

If you have questions or want to talk about where you'd like your gift directed, please reach out to me. I understand the difference you want to make, and I would love to chat with you about realizing your wishes to leave a lasting legacy through health research. **Reach out anytime!**

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