Annual Report

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New Brunswick Health Research Foundation

Fondation de la recherche en santé du Nouveau-Brunswick

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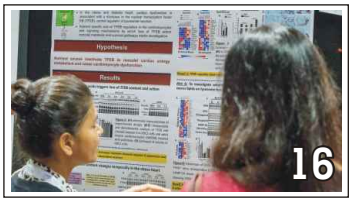

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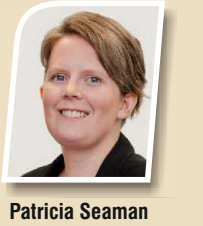

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MESSAGE FROM THE CHAIRPERSON AND THE INTERIM CEO

Monique Imbeault and Leah Carr

This year has been a year of measuring and evaluating our impact at the New Brunswick Health Research Foundation (NBHRF). We have welcomed new board members; had staffing changes; created new partnerships, upheld our priorities; and continued to promote, coordinate and support all aspects of health research.

Our priorities build on our strength as an organization to be collaborative. We have worked with key stakeholders to fund over 110 salary awards and operating grants worth over $4 million. The 2019-2020 annual report highlights the great work done in New Brunswick over the past year through such collaborations.

One of our key priorities is to align health research funding with the population health needs of the province. In 2019-2020, we had the opportunity to fund several projects that addressed the varied needs of older adults living in long term care facilities – Cindy Donovan and Dr. Rose McCloskey at Loch Lomond Villa, and Justine Henry and Dr. Jalila Jbilou at the Centre for Innovation and Research in Aging. By working with these partners, we were able to significantly enhance the quality of research being conducted.

Another priority is to invest in high-calibre strategic health research and further build capacity in people and infrastructure. This was achieved over the past year with Amrita Basu's research on liquid biopsies at the Atlantic Cancer Research Institute, Moulay Akhloufi's use of artificial intelligence to detect cancerous tumours at the Université de Moncton, and Julia Woodhall-Melnik's exploration of the impact on mental health before and after finding affordable housing at the University of New Brunswick (Saint John).

In July, we released Phase 1 of our 10-year Impact Assessment Report that outlined the short-term economic impact of the Foundation's activities. It is very encouraging to see that the analysis indicates that during its first 10 years of operation, the NBHRF generated a return on the Government of New Brunswick (GNB) investment of at least 74% and probably as high as 94%[1]. That is to say, for every dollar GNB invested in the NBHRF, between $1.74 and $1.94 in funding was provided to NB researchers.

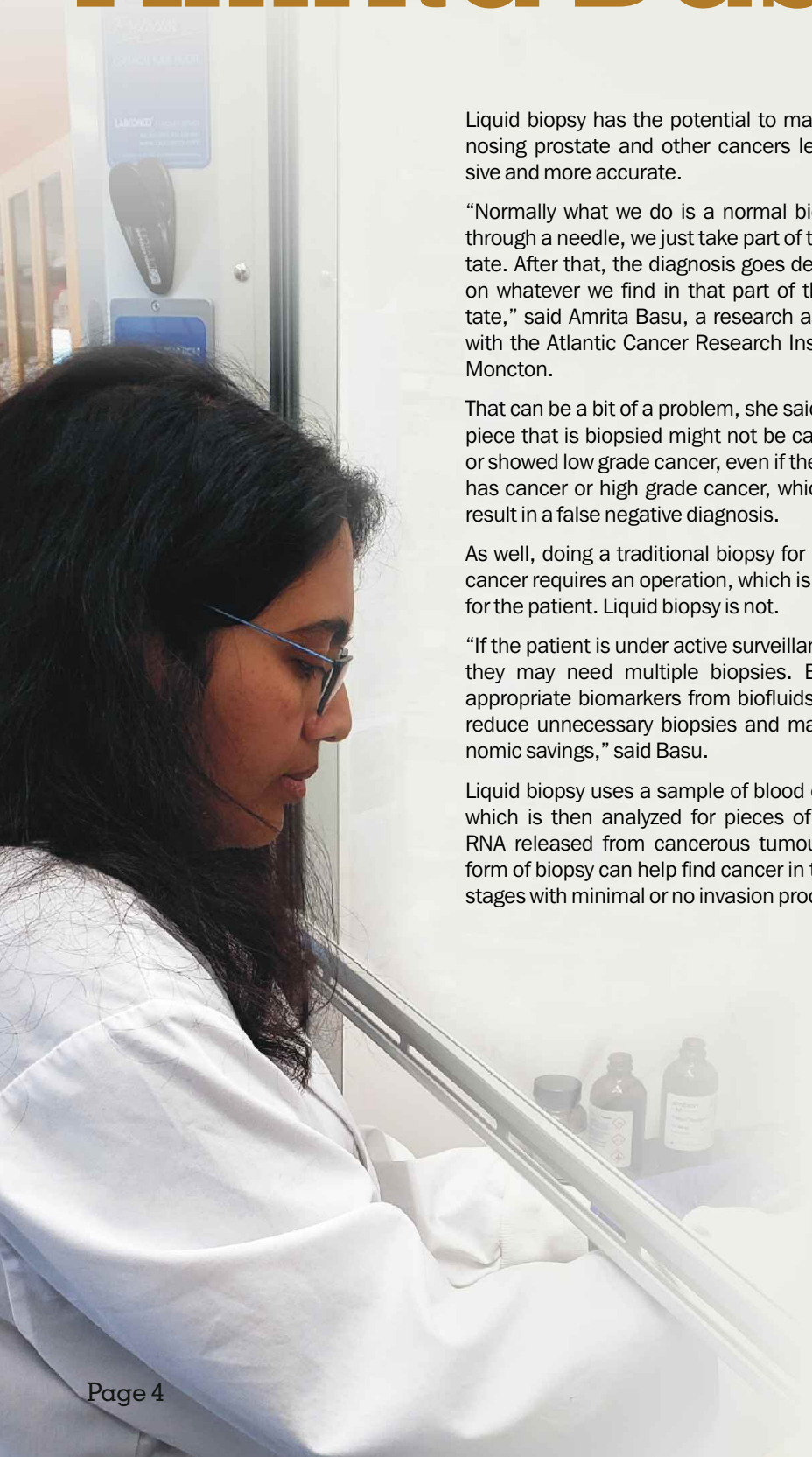
Phase 2 of the report, which focuses on the long-term economic impact of the Foundation's activities, will be released next year.

We encourage you to look through the articles in our report and celebrate these wonderful successes from the past year.

[1] The higher ROI estimate depends on the extent to which NBHRF capacity building activities can be credited with assisting researchers in obtaining grants independent of NBHRF involvement.

BUILDING CAPACITY

Amrita Basu



Liquid biopsy has the potential to make diagnosing prostate and other cancers less invasive and more accurate.

"Normally what we do is a normal biopsy, so through a needle, we just take part of the prostate. After that, the diagnosis goes depending on whatever we find in that part of the prostate," said Amrita Basu, a research associate with the Atlantic Cancer Research Institute in Moncton.

That can be a bit of a problem, she said, as the piece that is biopsied might not be cancerous or showed low grade cancer, even if the patient has cancer or high grade cancer, which could result in a false negative diagnosis.

As well, doing a traditional biopsy for prostate cancer requires an operation, which is invasive for the patient. Liquid biopsy is not.

"If the patient is under active surveillance then they may need multiple biopsies. By using appropriate biomarkers from biofluids we can reduce unnecessary biopsies and make economic savings," said Basu.

Liquid biopsy uses a sample of blood or urine, which is then analyzed for pieces of DNA or RNA released from cancerous tumours. This form of biopsy can help find cancer in the early stages with minimal or no invasion procedure.

Extracellular vesicles (EVs) are particles that naturally releases from cells and sometime called the cell's garbage bag, she said.

"ACRI has a patented peptide that can isolate EVs from biofluids, and from the vesicles we extract genetic materials. After doing the extraction, it goes for next generation sequencing and we compare the level of expression of genetic materials from a control and the patient," said Basu.

"For us, we are focusing on microRNA and tRNA (transfer RNA), for early detection and to distinguish between low- and high-grade prostate cancer during treatment," she said.

To date, they have sequenced approximately 37 patients and are now analyzing the data collected.

"They normally do a wait and watch, because (prostate cancer) grows very slowly, but once it metastasizes to the bone, the bone biopsies are hard to perform and are often limited by a low yield of tumor tissue," she said. "If we can do liquid biopsy, it would be much easier for both doctors and patients to find accurate results without pain."

This molecular analysis of tumour-derived components in body fluids can provide unique information and this is a rapidly emerging research that has the potential to give doctors and specialists a way to reduce the unnecessary stress, depression and anxiety of the patient, his relatives and caregivers from multiple invasive tests. It also reduces the cost of treatment.

Basu's work is possible thanks to a fellowship grant from the New Brunswick Health Research Foundation in partnership with Prostate Cancer Canada. It's work she finds rewarding.

She hopes that her hard work – and the hard work of her colleagues – makes a difference.

BUILDING CAPACITY

Albert Banerjee

As the New Brunswick Health Research Foundation Research Chair in Community Health and Aging, Albert Banerjee is building capacity in health care research.

"I am interested in the opportunities presented by an aging population," he said. "It affords us a chance to ask some profound yet practical questions about how to develop a more caring, compassionate, and sustainable society."

Currently, Banerjee is involved in three research projects. One stems from a 10-year project he was on led by Pat Armstrong out of York University in Toronto and was concerned with improving the quality of nursing home care.

"We won funding from SSHRC (Social Societies and Humanities Research Council) to study promising practices in nursing home care across six countries," he said, including Sweden, Norway, Denmark, Canada, the United Kingdom and the United States. "One of the most important lessons we learned was how important it was to foster relationships between care providers and residents, and how challenging and difficult that was because nursing homes are often under resourced."

In Canada, we have a large population providing care. His current research examines relational care and how we can support and empower workers who are already there, trying to do a great job, said Banerjee. He is studying strategies that foster creative, trusting relationships – especially among workers and between workers and management – to improve care for residents.

"Care is dynamic, and we need processes in place that empower staff to use their knowledge and creativity to improve care."

Another line of research he's doing relates to yoga and aging well.

"Yoga is very popular here in the west, but it's by and large a physical practice, used for fitness and mobility," said Banerjee. "Yet, yogic practice is fundamentally concerned with joy and suffering as well as how we deal with the fact that we are mortal and everything in this world is impermanent."

He is looking at how we can learn from practices like meditation and yoga to respond to our vulnerability and mortality in ways that are more caring, compassionate, and sustainable.

"So, I'm trying to use the fact of aging and our aging population as an opportunity to really challenge how we live in this world and how we can be more compassionate both as individuals and as a collective," he said.

His third line of research stems from the 10-year promising practice study. Led by Tamara Daly, and also funded by SSHRC, it brings together a core group of researchers from that original project to identify promising practices within age-friendly communities across five countries, including Australia, Taiwan, Norway, Germany and Canada.

As Banerjee is living in Fredericton, he is working with the city's age-friendly subcommittee that deals with the challenge of social isolation.

His research is helping to change the conversation around aging.

"I think we are afraid of what aging and death mean but at the same time if we have the support, wisdom and skills to deal with these profound yet sometimes frightening issues, we can more profoundly access the beauty of life," said Banerjee.

Plus, his role as chair enables him to connect his research to teaching, opening up his work to the next generation of researchers.

He appreciates the role the NBHRF plays in his work. "I wouldn't be here if it wasn't for the NBHRF. They provide important sources of funding, networking and community-building especially by fostering productive relationships between researchers and community groups," he said. "They're really an important catalyst for innovative community-based research."

BUILDING CAPACITY

Moulay Akhloufi

Artificial intelligence has the potential to positively impact many fields, including health care.

Moulay Akhloufi, a professor with the University of Moncton, said one possibility is using artificial intelligence or deep learning techniques to assist with diagnosis.

"For example, if you have a medical image like a CT scan or X-ray, you can process the image by computer using artificial intelligence and detect tumours," he said.

The machine is able to classify whether the tumours are cancerous or non-cancerous, helping the radiologist in their work.

"The tests that have been done, in China specifically, have shown that the machine has better performance than humans, because humans tend to make errors, especially if they are tired," said Akhloufi.

This is just one possible application. Another is to use data from genomics or proteomics – someone's DNA – to predict if someone will develop cancer. Armed with that information, doctors can work to prevent it, he said.

"But there are other (uses) like, for example, predicting the affluence in hospitals. If you can predict for your emergency room the number of persons that will be there at a specific time during the day, you can plan beforehand and have enough personnel on site," said Akhloufi.

"It's all related to using machine learning and deep learning to help in taking some decisions or diagnosing diseases. Since the computer can process a lot of data, this helps everybody."

Akhloufi's background is in computer vision. When he came to the University of Moncton, he had the opportunity to work in the medical imaging area. One of those opportunities was in genomics and proteomics with the Atlantic Cancer Research Institute.

"We are helping them with the analysis of genomics and proteomics extracted from liquid biopsy, like blood and urine. If you can use this data to predict cancer, you can be more efficient in the future," said Akhloufi.

They've been doing this work for about a year, he said, and have already had some interesting results.

Another area he is researching is eye disease. "I am in computer vision, so the eye appeals to me more probably than other organs because we use our eyes a lot of times and one of the diseases is diabetic retinopathy," he said.

Deep learning techniques have been developed that can predict the severity of diabetes simply by checking the image of the retina.

"We have close to a 99 per cent success in detecting different severities (of diabetes), just from the retinal image," said Akhloufi.

These are just a few examples of what is possible with artificial intelligence in health care – and researchers are learning more all the time, with the help of organizations like the New Brunswick Health Research Foundation.

Akhloufi received his first grant from NBHRF las year. "This is a start-up grant. The grants help do this kind of research, the kind of work that we can do here in New Brunswick, and (help us to) be able to get other grants in the future so that we can do more," he said, with impacts in many different industries. "Health care is just one of the areas we are targeting right now with artificial intelligence."

BUILDING CAPACITY

Julia Woodhall-Melnik

While it might appear that having access to affordable housing would improve mental health, the reality may be more complicated than that.

Health sociologist Julia Woodhall-Melnik is leading a research project that is trying to find out.

"The big project that I've been working on in partnership with the New Brunswick Health Research Foundation has been the Maritime Community Health and Housing Initiative," she said. "We are doing a longitudinal survey where we collect primary data on people's mental health, well-being, physical health and a lot of social indicators like income, neighbourhood satisfaction, access to resources, age, gender, and experiences of stigma."

Through a partnership with the Department of Social Development, the project has access to individuals who are on the rent geared to income subsidized housing waiting list in New Brunswick. The research team is collecting data every six months while people are on the wait list. Once they are offered housing, people are moved into an intervention group, where they are surveyed six-, 12- and 18-months post-move.

"We hope to get this really rich data set so we can compare outcomes pre- and post-move, where we have a large enough control group but where people also serve as their own controls," said Woodhall-Melnik. "Using this, we can see what residents' mental health situation was like prior to accessing affordable housing and how, and if, that changes after they were housed in affordable housing."

Studies out of Australia suggest mental health becomes worse with subsequent movements into affordable housing, she said, so anytime somebody moves, even if it's towards affordable housing, that instability created with moving can have a negative impact on mental health.

Though they aren't sure if that is true for New Brunswick, Woodhall-Melnik hypothesizes there may be a dip in mental health around the time the move takes place but eventually there is an upswing. That is why they decided to track people over 18 months post-move.

"At the end of the day, we know that we're going to find one of three things," she said. Either mental health is going to improve, there is no benefit and everything stays the same, or they see a decline in mental health or a decline at specific times, such as post move.

If the third possibility is the shown to be the case, they may be able to designate time points where interventions will be more impactful.

"It's a huge point of fascination for me because as a nation we've invested so much into these systems and we really don't know if we are doing it the right way," said Woodhall-Melnik.

In January, the research team learned the project received a $467,500 funding grant from the Canadian Institute of Health Research.

"The NBHRF provided the seed funding to really get it off the ground while I went and continued to apply for the longer-term funding," she said. "I'm really happy that because of NBHRF I had the space to obtain that funding, which I would not have otherwise." Woodhall-Melnik would also like to acknowledge the Faculty of Arts and Department of Social Science at University of New Brunswick (Saint John).

L to R: Avery Downes, Caitlin Grogan, Emily Forte and Emily Fox, Research Assistants

ALIGNING HEALTH RESEARCH WITH THE POPULATION HEALTH NEEDS OF THE PROVINCE

The Centivizer Project at York Care Centre

Justine Henry is part of a team that is looking for ways to improve the quality of life for residents at York Care Centre in Fredericton.

One of the ways they are doing this is by exploring the positive impact of technology on cognitive health.

Henry, manager of research services with the Centre for Innovation and Research in Aging (CIRA), is examining the efficiency and impact of Centivizer activation units in a long-term care setting.

"What the Centivizer does is it provides experiences like driving or travelling to different areas in the world that residents otherwise would not have access to," she said, including real life videos of swimming with dolphins and visiting with kangaroos in Australia. "There is also a simulated world that we call Memory Lane that offers residents the opportunity to drive around and complete a shopping list."

Two Centivizer units were placed in a high traffic area of the Dixon unit at York Care Centre.

"The reason we wanted to engage in this research is because promoting cognitive health is very important with older adults. We know that when there is not a lot of cognitive activation it can compound and worsen cognitive abilities, so keeping people activated is very important," said Henry.

They thought the Centivizer would be a great way to do this. "When we were conducting the study, we were collecting their (cognitive) level based on their electronic chart and then, as they progressed through the study, we continued to collect that data to see if there was any improvement or if it abated that decline."

The Centivizer Project

This is just one of the ways they hope to improve quality of life. "We actually just completed a facility-wide needs assessment at York Care Centre. The purpose was to assess the interests, needs, likes and, as we found out, sometimes dislikes," said Henry.

Using a questionnaire, they gathered information from 67 residents, 68 staff and 100 family members.

"We did it as often as possible in person with the residents because I strongly feel that if you're asking someone a questionnaire, it's the conversations that come out of that which give you the most insight into how someone is feeling," she said.

The questionnaire had five categories, looking at feelings towards activities, care, relationships, environment, and mental health.

"We compiled our results and they did indicate some areas that were awesome, but also some areas that needed some improvement," said Henry. "We don't view this as a bad outcome. YCC is always striving to be a leader of excellence in long-term care and being able to take a step back and assess the feelings and perceptions of staff, family and residents is very important in achieving that goal."

And, as a result, CIRA is now working towards new research studies around their findings. "We're seeking out new funding opportunities, as well as working with different collaborators and partners," said Henry. "I hope that the residents, staff and families can see that we're taking this information seriously."

What they are able to learn through their research will help not just York Care Centre, but other long-term care facilities in New Brunswick and across Canada.

The New Brunswick Health Research Foundation has played an important role in research being done in the province, she said. "I strongly believe collaboration is the key to great research."

ALIGNING HEALTH RESEARCH WITH THE POPULATION HEALTH NEEDS OF THE PROVINCE

Understanding Weight Stigma

While it is understood that weight stigma negatively impacts people in general, less is known about how it is experienced by specific groups.

Andrea Bombak, an assistant professor of sociology with the University of New Brunswick, is leading a team to find out more about this. Her project is weight stigma and health inequities as experienced by marginalized populations in New Brunswick.

"If people experience mistreatment or prejudicial attitudes because of their size, we know that has a variety of different kinds of negative health and social outcomes," she said, affecting stress, mental health, and the risk for developing things like heart disease and diabetes.

However, relatively little research has been done on the experience of weight stigma in diverse populations, and how weight stigmas can intersect with other kinds of stigmas, such as ageism.

"That is one thing that we're interested in with respect to this project," said Bombak. "The other thing we're interested in is looking specifically at local environments and places that are identified as being particularly meaningful to these diverse individuals' health and wellbeing."

The team has been conducting their research through interviews. Initially, they interview participants concerning their experiences with health care. A second interview focuses on places meaningful to their health and wellbeing. When possible, they have been going to those places with the individual and taking field notes.

"We were looking at people who are of a higher weight who are also older adults, people who are at a higher weight and also identified as primarily francophone, and people who are at a higher weight and also identified as being low income," she said. "And this summer, we are also moving into looking at people who are of a higher weight and identify as a sexual or gender minority, and people who are of a higher weight and who are also a newcomer to Canada within the past five years."

They chose these specific groups because they are relevant to New Brunswick, she said.

"These are groups that might encounter particular kinds of challenges or barriers or might be able to tell us something about the degree of inclusivity they encounter."

Their ultimate goal, from an academic perspective, is to contribute more knowledge about these particular local and diverse groups in the area in weight stigma, said Bombak.

"I think we can produce some locally relevant information that we could be using, insights from what our participants would prefer in medical encounters, how would they prefer to have weight addressed, what are some of their coping strategies with respect to stigma, and what are some of the ways we could work on making places more inclusive, more accepting, and where people can engage in healthy behaviours," she said.

"We're hoping to gather some best practices that might already be in place, and also identify areas that are in need of improvement as well."

Funding for this research was provided by the New Brunswick Health Research Foundation and the Banting Discovery Award, and has allowed her to hire some talented students to help with the project.

The NBHRF plays an important role in supporting research that is locally salient, said Bombak, including the research she is conducting.

ALIGNING HEALTH RESEARCH WITH THE POPULATION HEALTH NEEDS OF THE PROVINCE

Nursing Home Simulation Training Tool

Julie Weir, assistant director responsible for clinical and care innovation at New Brunswick Association of Nursing Homes, and Denise Paradis, executive director of the New Brunswick Continuing Care Safety Association, are working on a nursing home simulation training tool they hope will make training more economical and easier to fit into busy schedules.

Their tool uses virtual reality to bring training to the people who need it so they can learn new things in a safe environment.

"Instead of a two- or three-day course, everybody will be able to progress at their own pace and when they have time," said Paradis.

"When a new piece of equipment is implemented in the nursing home, we can insert a training tool into the simulation that can give staff members all the information on how to use it safely, why they use it, and then it can be documented that these employees have gone through the training and passed," said Weir.

Arjo Health, a leading supplier of equipment to nursing homes, is providing schematics of its equipment to be used in the tool, said Paradis.

"Each nursing home would be able to open up a virtual closet and pick the actual equipment they have in their nursing home," she said, so they can train on that specific equipment in virtual simulations.

Eventually, Weir and Paradis hope to be able to use the tool to simulate situations involving characteristics of actual residents in the home, better preparing staff for challenges

L to R: Jodi Hall, NBANH; Denise Parardis, NBCCSA; Jeff Mundee; Julie Wier, NBANH; Leah Carr, NBHRF

they might face on the jobThough they aren't able to do that yet, they are adding artificial intelligence to the tool so that if the person using it does something dangerous, it will stop.

"Our first scenario that we've chosen is Mrs. Smith isn't feeling her usual self today and has a doctor coming at 9:30," said Paradis. "It's 8:30 and you have to get Mrs. Smith ready to see the doctor."

The tool is teaching staff to assess every time they walk into a situation," said Paradis, with a focus on the resident. "At the same time, it encourages them to look at themselves and how they are feeling."

The staff member progresses through the scenario for 10 to 15 minutes, unless something happens that is dangerous.

"Let's say they don't use a piece of equipment and then they go to get Mrs. Smith out of bed and she falls, and the staff member falls along with her because they try to catch her," said Paradis. "The virtual reality training will go to a black screen and then open up again, showing the person walking towards a supervisor to report the incident."

The next time they log in, there is a virtual conversation with their supervisor about what happened the last time, which would have some clues about the approach they should try as they start again, she said.

The nursing home simulation training tool also offers different approaches to care that are more person-centred, such as music therapy. Initial funding for the project came from the Centre for Aging and Brain Health Innovation, with matching funds provided by the New Brunswick Health Research Foundation.

"There is a lot of cross-sector networking that happens through the influence of NBHRF that we wouldn't have access to otherwise," said Weir. "Their goal is to spread the news of this great work being done and they are very, very effective at that."

ALIGNING HEALTH RESEARCH WITH THE POPULATION HEALTH NEEDS OF THE PROVINCE

Healthy Seniors Pilot Projects

Nursing homes without walls, elder advisors, stroke navigation, and programs promoting creativity and physical activity are just a few of the initiatives that are part of the Healthy Seniors Pilot Project.

A three-year, $75M agreement between the Government of New Brunswick and the Public Health Agency of Canada, this program enables the province to test new ideas to find innovative solutions that will improve the health and quality of life of seniors in New Brunswick and beyond.

"The Healthy Seniors Pilot Project supports a range of applied research initiatives to examine how government and decision makers can better support seniors in their home, communities, and care facilities. It is exciting that this applied research approach will help inform future decision making in New Brunswick and throughout the country, so we can best serve our senior population," said Jane Breckenridge, team lead of the Seniors and Healthy Aging Secretariat with the Government of New Brunswick.

"Our province is perfectly situated to deliver the Healthy Seniors Pilot Projects given our aging demographic and linguistic duality," said Breckenridge, adding, "New Brunswick is also well positioned given our excellent research partners and community stakeholders and their desire for collaboration."

The pilot projects approved to date are a mix of community and government initiatives, with many of them already in progress. However, the recent pandemic has impacted the stage of each of the projects.

Having this opportunity for researchers, community groups and government to work together in this way has been one of the valuable impacts of the Healthy Seniors Pilot Project.

The New Brunswick Health Research Foundation is part of this team.

"The NBHRF have been a great partner through this journey. They have been there to provide solid advice, act as a sounding board, spread the word to the research community, and help to build partnerships," said Breckenridge.

The Healthy Seniors Pilot Project has five areas of focus which span the entire senior journey, including: improving social and built environments to foster healthy aging; using community approaches to reduce health inequalities; increasing independence, quality of life, and promoting healthy lifestyles; developing innovative care pathways; and using supportive technologies to foster healthy aging at home and in our communities.

"We are excited to start to learn how we have been able to make a difference through these pilots and how we can help shape the future for our senior population," said Breckenridge.

ALIGNING HEALTH RESEARCH WITH THE POPULATION HEALTH NEEDS OF THE PROVINCE

Research and Innovation at Loch Lomond Villa

When it comes to finding better ways to serve New Brunswick seniors, Loch Lomond Villa in Saint John isn't afraid to try new things.

The long-term care organization recently completed three one-year research projects that took place simultaneously at the villa, village and in communities across New Brunswick.

"The first one was 3D and Virtual Reality Experiences to Improve Cognitive Health and Life Enhancement for the Elderly," said Cindy Donovan, the CEO of Loch Lomond Villa.

For this project, an innovator from Alberta designed five 3D movies to be shown to residents with cognitive impairment, to see if watching the movies impacted behaviour and quality of life.

Fifty-four of the villa's nursing home residents were part of the study, along with 10 family members and 15 staff members.

"We would have the videos scheduled on the calendar, so it became a recreation activity as well for residents," said Donovan. "The objective was that every resident that participated would see all five videos at least once."

The resident's mood was measured prior to seeing the video, their reactions were observed while they watched, and then measurements were taken again four hours afterwards.

"It was a special project and everyone that was part of it was very happy with the results and what they witnessed," she said.

The second project was the Use of Ambient Technology in Nursing Homes for Clients with Dementia. This involved wall-mounted ABBY activity centres, created by an innovator from Ontario. The units are person-centred – a model of care that Loch Lomond Villa strives to provide.

"Quality of care is important, but how do we make sure that the resident living with us is an individual with person-centred care being offered to them to the best of our ability," said Donovan.

Two of the houses in the village at Loch Lomond Villa, each with 25 residents, were part of the ABBY activity project.

"We invited in families to explain what the benefit of this project would be and how they could be part of this exciting innovation because 98 per cent of residents in this project were cognitively impaired with dementia," she said.

With the help of family members, the profiles were designed based on a residents' life history, including video footage of places they lived, favourite music, family photos, and even the ability to pet a favourite animal.

Participating residents had a Bluetooth beacon, placed on their shoe or the back of their shirt. If the beacon came within a certain radius of the activity centre, their personal profile would come up. Aside from engaging the residents, the activity centres freed up the staff to do their work.


Cindy Donovan

This project looked at a number of different things, from the impact on residents, their medications, and mental health, to the ways it impacted staff.

The third project was the Feasibility and Usability of the WellAssist Solution by Routinify for Self-Care and Care Giving, originally developed by an innovator in Boston. It involves giving a tablet to seniors


Rose McCloskey

living in the community to help them remain in their home as long as possible.

The tablets were programmed with things like appointments, reminders to take medication, and music they enjoy, as well as connecting the seniors to caregivers living near and far.

The project began with 98 participants, from Moncton, Fredericton, Saint John and the area surrounding Saint John. Several people dropped out for different reasons and the project ended up with 64 participants. Along with the tablet, participants were also given Garmin fitness trackers.

"We did learn that you can't just put a tablet in someone's home and walk away from it, they still need that personal contact," said Donovan.

All three projects are now complete and Rose McCloskey, the principle investigator and a nursing professor at the University of New Brunswick Saint John, is now writing up the reports.

As the principle investigator, she oversaw the projects, making sure everyone stayed on task, mentoring research assistants, and analyzing data as it came in.

"The primary goal is to enhance quality of life for older adults, for those who are living with cognitive impairment or those who are caring for those with cognitive impairment. We are also looking to explore alternate methods that staff can engage residents with dementia in a meaningful way," said McCloskey. "We're very cognizant of the workload of staff and all the demands being placed on them, so we are looking at ways that are actually sustainable that can help staff."

They are also looking at ways that family members can engage their loved ones when they go into long-term care, she said.

"Working in health care, we all have a role to help design best practices and innovate and be creative in what we're doing around care or services that we are offering seniors," said Donovan.

The three projects were funded by the Centre for Aging and Brain Health Innovation, with matching funds from the New Brunswick Health Research Foundation.

"I can't even speak enough about New Brunswick Health Research Foundation and the help that they provided us, the direction, the support, forging new partnerships," said McCloskey. "There is a lot of really important research that is being done in New Brunswick. I encourage other researchers to do work here and lean on each other. Looking at all the talent we have here, we really can make a difference."

"The ABBY Project"

New Brunswick Health Research New Recruits

Dr. Veronica WHITFORD

PhD, Assistant Professor,
Department of Psychology,
University of New Brunswick

Dr. Veronica Whitford joined the Department of Psychology at the University of New Brunswick in the summer of 2019 as an Assistant Professor and Canada Research Chair. She obtained her Ph.D. in Experimental Psychology from McGill University in 2015. Subsequently, she completed two postdoctoral fellowships in Developmental Cognitive Neuroscience: the first at the University of Western Ontario and the second at Harvard University and the Massachusetts Institute of Technology. She employs a multi-method approach that includes both behavioural measures (e.g., eye-tracking) and neural measures (e.g., electroencephalography/EEG) to examine language and cognition in a number of populations with different linguistic and cognitive profiles. These include neurotypical monolingual, bilingual, and multilingual children and adults; individuals with language and learning disorders (e.g., developmental dyslexia); and individuals with neurodegenerative disorders (e.g., schizophrenia, Alzheimer's disease).

Dr. Isdore Chola SHAMPUTA

PhD, Assistant Professor,
Faculty of Nursing,
University of New Brunswick

I am an Assistant Professor in the Department of Nursing & Health Sciences at the University of New Brunswick Saint John since July 2018. I hold a PhD in Medical Sciences from the Vrije Universiteit Brussel, Belgium, post-doctoral training from the National Institutes of Health in Maryland United States and an undergraduate degree in Nursing from Dalhousie University, Halifax NS. My research experience is in infectious diseases, particularly the epidemiology of tuberculosis. I am currently involved in a study exploring the early detection of latent tuberculosis among immigrants to New Brunswick. My research interests include interprofessional education and collaboration, patient oriented research and the health of seniors. I have co-published 35 peer-reviewed papers, co-authored a Chapter in a book and an encyclopaedia and have been cited 2,028 times with a h-index of 23 in Google Scholar (July 13, 2020).

Dr. Andrea MORASH

PhD, Assistant Professor Faculty of Science
(Biology), Mount Allison University

The long-term goal of my research is to understand how vertebrate animals respond to environmental stress through changes in substrate use and mitochondrial function. In particular, I am interested in understanding the evolution of the hypoxic response and the capacity for mitochondrial ketone body metabolism to protect against hypoxic damage. I use a range of animal models for this research including sharks, sturgeon, salmon, mice and rats.

Dr. Vickie PLOURDE

PhD, Assistant Professor, School of
Psychology, Université de Moncton;
Chaire de recherche interdiscplinaire
en santé mentale des enfants et des jeunes

Dr. Plourde is an Assistant Professor in Psychology and holds the Interdisciplinary Research Chair in Mental Health of Children & Young People at the Université de Moncton. She is also an Adjunct Professor at Faculté Saint-Jean, University of Alberta. She completed her PhD in clinical psychology at the Université Laval and a postdoctoral fellowship in Pediatric Neuropsychology at the University of Calgary. Her expertise is in Child Clinical Psychology and Neuropsychology. Her past and current research focuses on 1) cognitive functioning and development in children and adolescents, 2) access to youth mental health care, and 3) assessment and intervention strategies in children and adolescents who have executive or attention difficulties, or prolonged post-concussive recovery. The overarching goal of her research is to create new knowledge on child and youth mental health that will inform services and contribute to continuous improvement in care.

New Brunswick Health Research New Recruits

Dr. Petrea TAYLOR

PhD, Assistant Professor,
Faculty of Nursing,
University of New Brunswick

Dr. Petrea Taylor joined the Faculty of Nursing (FON), UNB as an assistant professor in 2020. Gender, violence, and health with a specialty in suicidality are Dr. Taylor's research interests. Dr. Taylor is a co-investigator on two NBHRF Bridge Grants (PIs: Drs Kelly Scott-Storey & Sue O'Donnell) of men's cumulative lifetime violence and a joint NB Innovation Foundation/NBHRF grant (PI: Dr. David Busolo) on a virtual nursing clinical delivery model. Dr. Taylor is also a co-investigator on a CIHR funded grant of men, violence, gender, and health (PI: Dr. Scott-Storey). Promoting an environment of inquiry and a curiosity for social justice research in mental health are among Dr. Taylor's objectives as a member of the FON, Moncton campus. Dr. Taylor is currently examining women's suicidality during the COVID-19 pandemic using a feminist grounded theory study.

Dr. Claire JOHNSON

PhD, Professeur Adjointe,
École des hautes études publiques (HEP),
Université de Moncton

Dr. Claire Johnson is a registered dietitian and has been an assistant professor in healthcare management at the University of Moncton since 2018. Her PhD thesis, in Population Health at the University of Ottawa, was on administrative policies, determinants of health and weight gain in Canadian federal penitentiaries. Since then, her research interests have evolved to include program evaluations of nutritional interventions in schools, with the objective of assessing the impact of these interventions on eating habits; and timely access to primary care in New Brunswick, to identify factors that influence access to establish best organizational practices.

Dr. Stéphanie WARD

PhD, Professor, Registered Dietitian,
École des sciences des aliments,
nutrition et d'études familiales,
Université de Moncton

Dr. Stéphanie Ward is a Registered Dietitian and professor at the École des Sciences des aliments, de nutrition et d'études familiales at the Université de Moncton. Dr. Ward has been involved in numerous research projects that focus on the role of childcare and school environments, both physical and social, on the development of healthy weight and the promotion of healthy eating and physical activity among children. She is currently involved in the evaluation of multiple programs, including the impact of culinary classes on students' food literacy, as well as the assessment of a provincial school food pilot program. She plans on continuing to foster partnerships and involve graduate students in her research projects with the hopes that together, they will be able to improve community capacity building and ultimately, the health and wellbeing of New Brunswick children and youth.

11th Annual NB Health Research Conference and Gala of Excellence

On November 6 and 7, 2019, the New Brunswick Health Research Foundation (NBHRF) and Dalhousie Medicine New Brunswick (DMNB) presented "Using Research To Build a Healthier Society", the 11th Annual NB Health Research Conference and Gala of Excellence.

Over 200 attendees from over 50 entities participated. During the course of the conference, attendees heard from keynote speakers: Dr. Delphine Collin-Vézina, Dr. Susan Howlett, Dr. Yang Qu, Dr. Zainab Samaan, Dr. Lynn Nagle, Dr. Ted McDonald and Dr. Antoine M Hakim on topics ranging from Obesity Management to Health Data and Analytics.

Attendees also heard from New Brunswick researchers on various topics from Cannabis Research to Aboriginal Health. There were seven student research presentations from Christie Aguiar, Horizon Health Network; Victoria Rust, Mount Allison University; Dana El Mughayyar, Horizon Health Network; Danica Maillet, Université de Moncton; Dr. Dipsikha Biswas, Dalhousie Medicine New Brunswick; Andréa Lebel, Université de Moncton; and Dr. Helmi Alfarra, University of New Brunswick.

During the conference 69 posters were presented. On the final day of the conference, the following poster prizes were awarded:

Category	1st Prize	2nd Prize	3rd Prize
HEALTH PROFESSIONALS	**Angela Mercer,** Dalhousie Medicine New Brunswick	**Catherine Taylor,** Atlantic Cancer Research Institute	**Alexandrea Isabella Forbes,** Loch Lomond Villa
POST DOCTORAL FELLOWS	**Shreya Sarkar,** Saint John Regional Hospital	**Philippe-Pierre Robichaud,** Atlantic Cancer Research Institute	**Rebeca Martin-Jiménez,** Université de Moncton
PHD STUDENTS	**Daniel Saucier,** Université de Sherbrooke (CFMNB)	**François Gallant,** Université de Sherbrooke	**Patric Page,** Université de Moncton
UNDERGRADUATE, MEDICAL AND MASTER'S STUDENTS	**Jackson Weir,** University of New Brunswick	**Jacob Léger,** Université de Moncton	**Nicholas Fernandez,** Mount Allison University

People's Choice Award was also presented to Faith Moore of Dalhousie Medical School.

After Research Team of the Month presentations and a live vote at the Gala of Excellence on the evening of November 6, the Research Team of the Year Award was presented to a group that was studying hip fracture outcomes in hospitals all over New Brunswick. This team of ten researchers was a collaboration between Horizon Health Network, Réseau de Santé Vitalité, New Brunswick Trauma Program, and University of New Brunswick.

The conference and gala could not have been possible without the continued support from sponsors. The 2019 conference sponsors were Innovative Medicines Canada, Merck, GSK, Boehringer Ingelheim, Takeda, Astra Zeneca, and Roche.







2019-2020 Financial Highlights

Financing Profile	2018-19	2019-20
Revenues		
Province of New Brunswick	$ 5,152,956	$ 5,130,138
+ Other	$ + 267,374	$ + 178,503
TOTAL	**$ 5,420,330**	**$ 5,308,641**
NBHRF Funds invested in Salary Awards and Operating Grants	**$ 4,623,865**	**$ 4,089,968**
Leveraged Funds		
Federal Tri-Council	$ 1,569,391	$ 1,877,272
Canadian Foundation for Innovation	$ 3,960,095	$ 496,722
Networks Centres of Excellence	$ 503,342	$ 421,374
Health Charities and Foundations	$ 1,277,631	$ 946,950
Private Sector	$ 1,717,970	$ 1,177,281
Various Other	$ + 857,760	$ + 879,666
TOTAL	**$ 9,886,189**	**$ 5,799,265**
Funds Obtained Independently*		
Federal Tri Council	$ 1,929,125	$ 2,112,726
Canada Foundation for Innovation	$ 50,000	$ 0
Health Charities and Foundations	$ 1,862,423	$ 2,446,632
Healthy Seniors Pilot Project	$ 0	$ 3,866,643
NBIF	$ *not available	$ 1,424,765
+ Mitacs	$ + *not available	$ + 97,500
TOTAL	**$ 3,841,548**	**$ 9,948,266**
Total Funding Invested in New Brunswick Health Research		
NBHRF Funds	$ 4,623,865	$ 4,089,968
Leveraged Funds	$ 9,886,189	$ 5,799,265
+ Funds Obtained Independently	$ + 3,841,548	$ + 9,948,266
TOTAL	**$ 18,351,602**	**$ 19,837,499**
NBHRF Operating Expenses		
Administrative salaries & benefits	$ 354,038	$ 197,001
Research programming salaries & benefits	$ 152,030	$ 141,501
Administration & Operations	$ + 617,018	$ + 355,421
TOTAL	**$ 1,123,086**	**$ 693,923**
Operating Ratio		
Operating Expenses /	$ 1,123,086 /	$ 693,923 /
Total Funds invested in New Brunswick Health Research	$ 18,351,602	$ 19,837,499
Operating Ratio	**6.1%**	**3.5%**

* Approximate number as is determined from public information.
Additional funds may be obtained independently that NBHRF is not aware of.

NBHRF SALARY AWARDS

2019-20 SUMMER STUDENTSHIPS

Student	Researcher	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Mélissa Laplante	Anne-Marie Dion-Côté	UdM	Using Fundulus as a model system to understand mitochondrial dysfunction	1	Disease	$3,500	$4,500	$8,000
Jackson Weir	Tony Reiman	UNB	Identifying alternative targets for individualized multiple myeloma immunotherapy	1	Cancer	$6,900	$2,000	$8,900
Marie Sukkar	Karen Crosby	MtA	The impact of stress on synaptic fundtion in the rat dorsomedial nucleus of the hyopthalamus	1	Stress	$6,900	$6,000	$12,900
Michelle Suk	Dawn MacIsaac	UNB	Workplace Monitoring of surface Electromyography	1	Musculoske-letal Health	$6,900	$500	$7,400
Hayley Hartlen	Jason Hickey	UNB	Impact of Culture on wellbeing of Indigenous Youths in Foster Care	4	Indigenous Health	$6,900	$0	$6,900
Alexandre Banks	Jon Sensinger	UNB	Development of a rehabilitation model for use with Adaptive Optimal Control	2	Rehabilitation	$2,400	$4,500	$6,900
Melina Paz	Sara Eilser	UNB	Identifying Lyme Markers with Fluorescent Sensors	1	Lyme Disease	$6,900	$4,000	$10,900
Naythrah Thevathasan	Shelley Doucet	UNB	Innovating Pediatric Behavioural Assessments and Care Pathways	3	Child Health Care	$5,175	$0	$5,175
Jennifer Clarke	Alison Luke	UNB	Evaluating the Process of a Pediatric Patient Navigation Centre in NB	3	Child Health Care	$6,900	$0	$6,900
Bradley McMullin	Martin Senechal	UNB	Exercise Response in Prediabetic Individuals	4	Diabetes	$6,900	$0	$6,900
Ashely Erb	Michelle LaFrance	STU	Developing Age-Friendly Solutions: Information & System Navigation for Older Adults	4	Seniors' Health	$6,900	$1,836	$8,736
Neil Mueller	Thomas Pulinilkunnil	UNB	Role of KLF15 in Triple Negative Breast Cancer	1	Cancer	$2,500	$4,500	$7,000
Esther Yi	Petra Kienesberger	UNB	The effect of dietary peptides on obesity-included inslulin resistance	1	Diabetes	$6,900	$0	$6,900
Marie-France Soucy	Luc Boudreau	UdM	Functional Platelet-derived mitochondria induce the release of neutrophil microparticles	1	Inflammatory Disease	$6,900	$5,000	$11,900
Fareeha Quayyum	Stephan Dombrowski	UNB	A theoretical domains framework based interview study of pre-conception perceptions and support needs in NB women and their partners	4	Pre-Natal Health	$6,900	$1,000	$7,900
TOTAL						**$89,475**	**$33,836**	**$123,311**

2019-20 GRADUATE STUDENT HEALTH RESEARCH AWARDS

Researcher	Type	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Kerrie Luck	PDF	UNB	Informing a Transition Strategy for Children with Complex Health Care Needs and Their Families in NB	3	Primary Care	$40,000	$0	$40,000
Veronique Thibault	PhD	UdM	Lien entre l'intention liée au controle du poids et des facteurs shychosociaux, et comportementaux et des mesures anthropométriques de l'adelescence à l'age adulte	4	Obesity	$24,500	$0	$24,500
Geneviève Hamel-Coté	PDF	UdM	Localized activation of heterotrimetic G proteins: the protein tyrosine phosphatase connection	1	Alzheimers	$40,000	$0	$40,000
Patric Page	PhD	UdM	Etude du miR 2355-5p et de sa cible potentielle, SUSD4, au niveau des carinomes rénaux à cellules claires	1	Cancer	$13,790	$0	$13,790
Dipsikha Biswas	PDF	DMNB	Diabetic Cardiomyopathy: Role of transcriptional drivers of lysosomal function	1	Cardiac Disease	$40,000	$0	$40,000
David Miller	PhD	UNB	Youth Readmission to Inpatient Psychiatric Care: Perspectives of Patients and Service Providers	3	Mental Health	$5,115	$19,385	$24,500
Breagha Newcombe	PhD	UNB	Anxiety sensitivity and post-traumatic stress disorder: Can reducing anxiety sensitivity in First Responders decrease the onset and severity of PTSD symptoms?	2	Mental Health	$5,115	$19,385	$24,500
Dannik Martin	MSc	UNB	Caracterisation des partenaires proteiques des ARNs circulaires de Pax-5 dans le cancer	1	Cancer	$17,000	$0	$17,000
Kathryn Thompson	PDF	UNB	Integrating Patient-Oriented virtual health services into the New Brunswick navigation centre for children with complex health conditions	3	Child Health	$12,500	$12,500	$24,500
TOTAL						**$198,020**	**$50,770**	**$248,790**

2019-20 MARITIME SPOR SUPPORT UNIT STUDENT HEALTH RESEARCH AWARDS

Researcher	Type	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
M. Keshavarz	PhD	UNB	Benefits of Resistance Training for Men Living with Obesity	4	Obesity	$24,500	$0	$24,500
A. Das	PDF	NBCC	Harm Reduction and patient oriented healthcare for vulnerable women	3	Womens' Health	$14,645	$4,900	$19,545
Travis Hrubeniuk	PhD	UNB	Improving the proportion of exercise responders in individuals with prediabetes or Type 2 diabetes: administrative to empirical evidence	4	Diabetes	$24,500	$7,500	$32,000
TOTAL						**$63,645**	**$12,400**	**$76,045**

2019-20 CLINICAL SCHOLARSHIPS

Researcher	Affiliation	Area of Research	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Dr. Colleen O'Connell	SCCR / HHN	Rehabilitation	1,3	Rehabilitation	$40,000	$0	$40,000
Dr. Sarah Gander	HHN	Social Pediatrics	2	Pediatrics	$53,600	$56,250	$109,850
Dr. Ben Amor	RSV	Carrier Screening	2,4	Genetics	$51,817	$136,800	$188,617
Dr. Tracy Rickards	UNB	Marginalized Population Health	4	Public Health	$25,000	$75,000	$100,000
TOTAL					**$170,417**	**$268,050**	**$438,467**

2019-20 RESEARCH CHAIRS

Researcher	Affiliation	Chair Title	Funding Partner	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Shelley Doucet	UNB	Interprofessional Patient Centred Care	The Jarislowsky Foundation	3,4	Patient Care	$50,000	$50,000	$100,000
Vicki Plourde	UdM	Interdisciplinary Chair in Child & Youth Mental Health	UdMoncton, Centre Formation Medicale du NB	4	Mental Health	$100,000	$250,000	$350,000
Anthony Reiman	DMNB	CIHR-SPOR-iCT (Innovative Clincal Trials) Mentorship Chair in Innovative Clinical Trials	CIHR	1,2,3	Clinical Care	$104,500	$80,000	$184,500
Jeffrey Hebert	UNB	Canadian Chiropractic Association Chair in Musculoskeletal Health	Canadian Chiropractic Association	1,2,4	Musculoskeletal Health	$100,000	$100,000	$200,000
Yang Qu	UNB	Cannabis Research Chair	Tetra Bio-Parma	1	Medical Cannabis	$100,000	$100,000	$200,000
Albert Banerjee	STU	Community Health & Aging	n/a	2,3,4	Seniors' Health	$100,000	$100,000	$200,000
Jason Hickey	UNB	Indigenous Health Research Nursing Chair	CIHR, CNF	3,4	Indigenous Health	$25,850	$79,150	$105,000
TOTAL						**$580,350**	**$759,150**	**$1,339,500**

NBHRF GRANTS

2019-20 ESTABLISHMENT GRANTS

Researcher	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Andrea Bombak	UNB	Weight Stigma and Health Inequities in New Brunswick Marginalized Communities	4	Obesity	$60,000	$0	$60,000
Julia Woodhall-Melnik	UNB	The Maritime Community Health and Housing Initiative	4	Health	$60,000	$0	$60,000
Moulay Akhloufi	UdM	Artificial Intelligence for Healthcare	3	Healthcare	$60,000	$166,000	$286,000
TOTAL					**$180,000**	**$166,000**	**$406,000**

2019-20 BRIDGE GRANTS

Researcher	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Danielle Bouchard	UNB	Stand While You Can	4	Seniors' Health	$28,000	$0	$28,000
Sue O'Donnell	UNB	Cumulative Lifetime Violence and men's health promotion processes: A grounded theory photovoice study	4	Mens' Health	$34,973	$0	$34,973
Kelly Scott-Storey	UNB	Variation in Men's Health by Cumulative Lifetime Violence Severity and Social Determinants of Health: A Longitudinal Exploratory Study	4	Mens' Health	$34,409	$0	$34,409
Luc Boudreau	UdM	Horizontal transfer of cell-derived mitochondria promotes the imflammatory state of human neutrophils	1	Arthritis	$35,000	$0	$35,000
TOTAL					**$132,282**	**$0**	**$132,282**

2019-20 WORKSHOP GRANTS

Researcher	Affiliation	Workshop Title	Number of Attendees	NBHRF Funding	Leveraged Funding	Total Funding
Shelley Doucet	UNB	Patients Den	100	$5,000	$14,350	$19,350
S. Dupuis-Blanchard	UdM	Canadian Association of Gerontology Annual Conference	500	$5,000	$192,740	$197,740
C. Gray	UNB	Maritime Natural Products Research Conference	75	$3,000	$8,000	$11,000
M. Bélanger	UdM	How do we win the MATCH?: Planning the future of physical activity research	35	$2,800	$10,438	$13,238
M. MacLennan	UNB	Reaching Higher 2020	100	$2,000	$11,000	$13,000
TOTAL				**$17,800**	**$236,528**	**$254,328**

2019-20 PHSI GRANTS

Researcher	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Helene Albert (Piat)	UdM	Mental Health Recovery Guidelines	3	Mental Health	$6,588	$6,588	$13,176
TOTAL					**$6,588**	**$6,588**	**$13,176**

2019-20 TRAVEL GRANTS

Researcher	Affiliation	Conference Title	Number of Attendees	NBHRF Funding	Leveraged Funding	Total Funding
Neeru Gupta	UNB	Fifth Global Symposium on Health Systems Research	2,200	$600	$600	$1,200
Nancy Black	UdM	International Ergonomics Association Conference	1,500	$1,500	$1,500	$3,000
Syvia Gautreau	HHN	Canadian Orthopaedic Association Annual Meeting	1,400	$949	$949	$1,898
Chris Jennings	UNB	Canadian Chemistry Conference	500	$750	$750	$1,500
Tracey Ferguson	SCCR/HHN	Cerebral Palsy and Developmental Medicine Conference	3,000	$1,180	$2,370	$3,550
Caitlin Grogan	UNB	European Network for Housing Research	150	$1,500	$1,500	$3,000
Gabriel Wajnberg	ACRI	Conference on Intelligent Systems and the European Conference on Computational Biology	500	$1,500	$1,500	$3,000
N. Gupta	UNB	International Health Workforce Collaborative 18th Conference	120	$1,000	$1,295	$2,295
T. Hrubeniuk	UNB	Canadian Society for Exercise Physiology Annual General Meeting	500	$800	$800	$1,600
D. Connell	UNB	Dutch Partnership Mission October 2019	250	$1,329	$4,186	$5,515
A. Bera	ACRI	5th Canadian Cancer Research Conference	1,000	$846	$859	$1,705
C. Aguiar	DMNB	5th Canadian Cardiovascular Congress	2,000	$1,000	$1,000	$2,000
S. Sarkar	DMNB	Canadian Cardiovascular Congress	1,000	$1,000	$1,150	$2,150
TOTAL				**$13,954**	**$18,459**	**$32,413**

NBHRF HEALTH RESEARCH INITIATIVES
(FUNDED WITH NAMED PARTNERS)

2019-20 WITH CENTRE FOR AGING + BRAIN HEALTH INNOVATION

Researcher	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Carole Goodine	UNB	Polypharmacy App to Improve Health Outcomes in Older Adults	3	Senior's Health	$20,000	$20,000	$40,000
D. Shukla	UNB	Connecting Family Caregivers of Seniors with Information and Resources to Support their Daily Care Giving Tasks and Responsibilities	3	Senior's Health	$29,964	$29,964	$59,928
Sarah Pakzad	UdM	Development and Validation of the NFI Prototype Application for Early Detection of Dementia in the Elderly	3	Senior's Health	$20,000	$20,000	$40,000
Rose McCloskey	UNB and LLV	Feasibility and usability of the well-assist system by Routinify for self-care and caregiving	3	Senior's Health	$26,122	$26,122	$52,244
Rose McCloskey	UNB and LLV	3D and Virtual Reality experiences to improve cognitive health and life enhancement for the elderly	2	Senior's Health	$18,198	$18,198	$36,396
Rose McCloskey	UNB, UdM and LLV	Use of Ambient Technology in Nursing Homes for Residents with Dementia	4	Senior's Health	$29,863	$29,863	$59,726
Justine Henry	CIRA	Centivizer	3	Senior's Health	$35,000	$35,000	$70,000
Julie Weir	NBCCSA	Nursing Home Simulation Tool	4	Senior's Health	$50,000	$50,000	$100,000
TOTAL					**$229,147**	**$229,147**	**$458,294**

2019-20 WITH AGEWELL

Researcher	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Candice Pollack / Dan Dutton	APPTA	Innovation Hub - Policy and Practice	4	Senior's Health	$228,250	$228,250	$456,500
Ryan Buyting	DMNB	Implementation of Remote Monitoring and Telehealth technologies to reduce Diabetic Foot Amputations and Adverse Cardiac Events for Remote Indigenous Populations	4	Indigenous Health	$36,500	$20,000	$56,500
TOTAL					**$264,750**	**$248,250**	**$513,000**

2019-20 WITH CANADIAN FRAILTY NETWORK

Researcher	Type	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Danielle Bouchard	CAT	UNB	Stand if You Can	4	Senior's Health	$20,030	$60,090	$80,120
Pam Jarrett	CAT	UNB	Optimizing transitions from hospital to home for frail older adults	3	Senior's Health	$7,425	$37,400	$44,825
Keith Brunt	CAT	DMNB	Benefit of a Telehealth home-monitoring program for patients living with frailty undergoing heart surgery	3	Senior's Health	$9,375	$28,125	$37,500
S. Dupuis-Blanchard	CAT	UdM	Social Frailty in Recently Relocated Semi-independent Older Adults	3	Senior's Health	$17,232	$51,696	$68,928
D. Bouchard (S. Webb)	SSHP	UNB	Exercise and Diabetes	4	Senior's Health	$4,500	$2.092	$6,592
D. Bouchard (M. Gallibois)	SSHP	UNB	An investigation of the long-term benefits associated with a standard intervention for residents living in long term care	2	Senior's Health	$4,500	$2.092	$6,592
T. Rickards (R. Marshall)	SSHP	UNB	Clinical Care	2	Senior's Health	$4,500	$2.092	$6,592
C. McGibbon (J. Shanks)	SSHP	UNB	Outcomes in Frail Older Adults with Isolated Hip Fractures in New Brunswick	2	Senior's Health	$4,500	$2.092	$6,592
Kendra Cooling	IFP-MSc	UNB	Optimization of community/residential care	2	Senior's Health	$12,500	$12,500	$25,000
TOTAL						**$84,562**	**$198,179**	**$282,741**

2019-20 SPOR MATCHING FUNDS WITH CANADIAN INSTITUTES OF HEALTH RESEARCH

Researcher	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Shelley Doucet	UNB	SPOR Network in PIHCI	3,4	Primary Care	$100,000	$100,000	$200,000
Shelley Doucet	UNB	Case management for frequent users	3	Primary Care	$50,000	$50,000	$100,000
Shelley Doucet	UNB	Determining research priorities to improve the integration of care for individuals with complex care needs and their caregivers in New Brunswick	3,4	Primary Care	$20,000	$80,000	$100,000
Ted McDonald	UNB	Maritime SPOR Support Unit - NB Node - IRDT	All	Health	$180,836	$880,000	$1.060,836
Vickie Plourde	UdM	ACCESS-NB (Transformational Research in Adolescent Mental Health)	3	Mental Health	$350,000	$342,033	$692,033
Pam Jarrett	HHN	New Brunswick participation in the creation of a pan-Canadian set of cohorts of patients with various neurodegenerative diseases	4	Senior's Health	$121,663	$60,000	$181,663
Mathieu Belanger	UdM	Diabetes Chronic Disease Network	4	Diabetes	$75,000	$61,612	$136,612
Shelley Doucet	UNB	Child Bright Chronic Disease Network	4	Childrens' Health	$50,000	$50,000	$100,000
TOTAL					**$947,499**	**$1,623,645**	**$2,571,144**

2019-20 WITH CANADA FOUNDATION FOR INNOVATION

Researcher	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Martin Senechal	UNB	Innovative cardiometabolic, obesity and Physical ACTivity research – New Brunswick (IMPACT-NB)	4	Obesity	$49,785	$86,495	$136,280
Yang Qu	UdM	Biochemical and genetic engineering of novel cannabinoids	1	Cannabis	$25,000	$410,227	$435,227
TOTAL					**$74,785**	**$496,722**	**$571,507**

2019-20 WITH PROSTATE CANCER CANADA

Researcher	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Amrita Basu	ACRI	Prostate Cancer Research	1	Cancer	$33,050	$33,050	$66,100
TOTAL					**$33,050**	**$33,050**	**$66,100**

2019-20 WITH BEATRICE HUNTER CANCER RESEARCH INSTITUTE

Researcher	Affiliation	Type	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
David Busolo	UNB	Seed	The implication of SOX17 in ovarian cancer gene expression responsible for cancer aggressiveness	3	Cancer	$14,924	$9,949	$24,873
Victoria Northtrup	DMNB	CRTP-PhD	Genetic variants of erythropoietin and their potential as Therapeutics	1	Cancer	$10,710	$7,140	$17,850
Luc Martin	UdM	Seed	Improving Cancer Screening for Immigrant and Refugee Adults in New Brunswick	1	Cancer	$6,000	$4,000	$10,000
TOTAL						**$31,634**	**$31,634**	**$52,723**

NBHRF STRATEGIC GRANTS

2019-20 STRATEGIC INITIATIVE GRANTS

Researcher	Affiliation	Project Title	Pillars	Areas	NBHRF Funding	Leveraged Funding	Total Funding
Rodney Ouellette	ACRI	Multidimensional integrative prognostic signatures combining tissue and plasma profiling in triple negative breast cancer patients	1	Cancer	$80,000	$666,666	$746,666
Sohrab Lutchmedial	HHN	Clinical Algorithm Development for Advanced E-Health Innovations in Non-Invasive Monitoring Devices for Chronic Disease Management	2	Chronic Disease	$22,142	$23,623	$45,765
Dan Smyth	HHN	Building the infrastructure to understand the impact of disease and its treatment in the broader social context: administrative data linkage between health, justice and social development	3	Infectious Disease	$50,000	$100,000	$150,000
Farah Naz	HHN	Analysis of volatile chemicals in the breath of breast cancer patients using infrared spectroscopy	2	Cancer	$30,713	$105,339	$136,052
Danielle Bouchard	UNB	Do Physical Activity Levels Predict Functional Improvements following a structured Exercise Program for Women	4	Physical Activity	$22,000	$44,000	$66,000
Chris Baker	UNB	Occupational Health: Job Title Cleaning by Algorithm	4	Occupational Health	$15,000	$20,000	$35,000
Sohrab Lutchmedial	HHN	Enriching the Real World Evidence Database for Cardiovascular Health in New Brunswick	4	Cardiac Disease	$67,500	$67,500	$135,000
Ted McDonald	UNB	New Brunswick Health Information System Platform	4	COPD	$25,000	$25,000	$50,000
Janine Olthuis	UNB	A brief workplace intervention for anxity sensitivity in First Responders	4	PTSD	$4,972	$9,945	$14,917
TOTAL					**$182,855**	**$1,062,073**	**$1,379,400**

FUNDS OBTAINED WITHOUT NBHRF CONTRIBUTION (SALARY AWARDS AND GRANTS)

Researcher	Affiliation	Program	Project Title	Pillars	Areas	Period	Duration	Total Funding	2019-20 Funding	Funding Year
Private Foundations / Health Charities / Non-Tri-Council Federal Agencies										
Sandra Turcotte	UdM / ACRI	NB Chapter - Canadian Cancer Society, Health Research Chair	To characterize VHL function in autophagy to develop a therapeutic strategy based on synthetic lethality to target renal cancer cells	1,3	Cancer	2015-16 to 2019-20	2nd term - 5 years renewal	$440,000	$110,000	Y5
Tony Reiman	UNB / HHN-SJRH / DMNB	NB Chapter - Canadian Cancer Society, Health Research Chair	To advance the quality of life and survival of patients receivng cancer drug therapy, focusing on lung cancer, lymphoma, and multiple myeloma by bridging the gap between the laboratory and the clinic	1,3	Cancer	2015-16 to 2019-20	2nd term - 5 years renewal	$440,000	$110,000	Y5
Tony Reiman	UNB / HHN-SJRH / DMNB	Terry Fox Research Institute	The Terry-Fox pan-Canadian Multiple Myeloma Molecular Monitoring Cohort Study	1	Cancer	2016-17 to 2021-22	5 years	$5,000,000	$1,000,000	Y4
A. Leis, A. Froehlich Chow, D. Bouchard, D. Donovan, H. Vatanparast, H. Humbert, L. Sénéchal, M. Bélanger, N. Muhajarine, N. Sari, S. Ward	CFMNB	PHAC	Healthy Start/Départ Santé: A multi-level intervention to increase physical activity and healthy eating among young children (ages 3 - 5) attending early learning programs PHASE III	4	Obesity	2017-18 to 2019-20	3 years	$161,496	$53,832	Y3
Petra Kienesberger	DMNB	Heart & Stroke Foundation of Canada National New Investigator Award	The role of autotaxin-lyso-phosphatidic acid signaling in obesity-related heart disease	1	Cardio-vascular Health	2018-19 to 2021-22	4 years	$260,000	$65,000	Y2
Francis LeBlanc	UdM	ACOA	Establish the New Brunswick Centre for Precision Medicine	2	Precision Medicine	2019-20 to 2020-21	2 years	$3,155,994	$157,800	Y1
Centre for Research on Youth at Risk	UNB / HHN-SJRH / DMNB	ACOA	Gender Based Violence Program	4	Youth Health	2019-20 to 2023-24	5 years	$1,000,000	$200,000	Y1
Edward Yuzda, Andrew Garsch	HHN	Veterans Affairs Canada	Shaping Purpose - Military Veterans with PTSD	4	Mental Health	2019-20	1 year	$750,000	$750,000	Y1
TOTAL FOUNDATIONS ETC.								**$11,207,490**	**$2,446,632**	
CIHR										
F. Legare, A. Bilodeau, L. Gosselin, E. Etheir, D. Prud'homme, S. Desroches, D. Stacey, F. Borduas, C. Monette, I. Auclair, M. Ouimet, G. Roch, V. Borde, C. Jose et al	CFMNB	Project Grant	MATRICES-F: Application des con-naissances axée sur le genre et le sexe des personnes en contexte Francophone	4	Gender & Health	2017-18 to 2020-21	4 years	$150,000	$37,500	Y3
E. Hébert-Chatelain	UdM	Canada Research Chairs - CIHR Funded	Canada Research Chair - Tier 2	1	Alzheimer's Disease	2018-19 to 2019-20	3 years	$175,000	$87,500	Y2
E. Hébert-Chatelain	UdM	Project Grant	Mitochondrial G protein signaling in the physiopathology of cognitive pro-cesses: a focus on Alzheimer's disease	1	Alzheimer's Disease	2018-19 to 2019-20	1 year	$324,360	$162,180	Y2
O'Donnell, Susanne Mary; Scott- Storey, Kelly ; Wuest, Judith Anne	UNB	Operating Grant	Masculinities, Lifetime Violence and Health	4	Men's Health	2014-15 to 2019-20	5 years	$383,676	$76,735	Y5
Olthuis, Janine Vlaar	UNB	Project Grant	Comparing the efficacy of CBT for anxiety sensitivity to disorder-specific CBT in reducing mental health symp-toms: A randomized controlled trial	4	Mental Health	2016-17 to 2019-20	4 years	$424,298	$106,075	Y2
Rioux, Brittany Victoria	UNB	Doctoral Award - Frederick Banting and Charles Best Canada Graduate Scholarships	Exercise Response: Is Irisin a Novel Factor that Explains the Metabolic Adaptation?	1	Obesity	2018-19 to 2019-20	2 years	$50,000	$25,000	Y2
Turcotte, Sandra	UdM	Operating Grant	Exploiting synthetic lethality in Renal Cell Carcinoma: Targeting the loss of the von Hippel-Lindau tumor suppres-sor gene through autophagy for the development of anticancer therapy	1	Cancer	2014-15 to 2019-20	5 years	$495,930	$99,186	Y5

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Researcher	Affiliation	Program	Project Title	Pillars	Areas	Period	Duration	Total Funding	2019-20 Funding	Funding Year
Hickey, Jason	UNB	Research Chair	The Indigenous Health Nursing Chair	4	Indigenous Health	2019-20 to 2024-25	5 years	$699,500	$699,500	Y1
Gupta, Neeru	UNB	Operating Grant	Neighbourhood environments as a determinant of physical and mental health outcomes in a context of smaller urban and rural settlements	4	Physical & Mental Health	2019-20	1 year	$74,334	$74,334	Y1
Ward, Stephanie	UdM	Planning Grant	Planning workshop to improve healthy behaviours among New Brunswick school-age children	4	Child Health	2019-20	1 year	$8,904	$8,904	Y1
Aitkens, Janelle	UNB	Master's Award: Frederick Banting and Charles Best Canada Graduate Scholarships	Impact of Bio-Feedback on Activity-Dependent Neural Plasticity after Spinal Cord Injury	1	Spinal Cord Injury	2019-20	1 year	$17,500	$17,500	Y1
Colpitts, Benjamin	UNB	Master's Award: Frederick Banting and Charles Best Canada Graduate Scholarships	Metabolic Inflexibility during Sprint Interval Training: The iFLEX Study	1	Diabetes	2019-20	1 year	$17,500	$17,500	Y1
Fournier, Vanessa	UdM	Master's Award: Frederick Banting and Charles Best Canada Graduate Scholarships	Impact d'une thérapie cognitivo comportementale par Internet pour réduire les listes d'attentes de centres de santé mentale communautaires: étude de faisabilité auprès de jeunes canadiens	4	Mental Health	2019-20	1 year	$17,500	$17,500	Y1
Surette, Marc	UdM	Project Grant	Impact of dietary stearidonic acid-rich oil on rheumatoid arthritis	1	Arthritis	2019-20 to 2024-25	5 years	$815,490	$163,089	Y1
Woodhall-Melnik, Julia	UNB	Project Grant	The Maritime Community Health and Housing Initiative: Investigating the Impact of Public Housing Interventions on Mental Health and Healthcare Use in Low-Income Households in New Brunswick	4	Mental Health	2019-20 to 2024-25	5 years	$466,650	$93,330	Y1
TOTAL CIHR								**$4,120,642**	**$1,126,242**	
SSHRC										
M. Bélanger, J. O'Loughlin, C. Sabiston, K. Gunnell, R. Vallerand, J. Brunet	CFMNB	Operating Grant	Monitoring Activities of Teenagers to Comprehend their Habits (MATCH): An eight-year study on sport participation and its determinants	4	Obesity	2015-16 to 2019-20	5 years	$200,526	$40,105	Y5
Jeremie Dupuis	UdM	Doctoral Award	Social Determinants of Health on Probabilities of Academic Achievement and Mental Health for NB Youth: A Bayesian Predictive Model	4	Mental Health	2019-20 to 2021-22	3 years	$165,000	$55,000	Y1
Jeff Foshay	UNB	Doctoral Award	Understanding the Role of Coping in the Use of Unwanted Pursuit Behaviours in Young Adulthood	4	Mental Health	2019-20	1 year	$20,000	$20,000	Y1
David Busolo	UNB	Insight Grant	Improving newcomers' wellbeing through nature-based approaches	4	Immigrant Health	2019-20	1 year	$61,731	$61,731	Y1
Matchim, John R.	UNB	Joseph-Armand Bombardier Doctoral Award	International Grenfell Association hospital ships and rural-remote health care, 1965-1972	4	Rural Health Care	2019-20	3 years	$105,000	$35,000	Y1
Mullally, Sasha	UNB	Insight Grant	not available - n/a	n/a	n/a	2019-20 to 2021-22	3 years	$56,789	$18,930	Y1
De Baerdemacker, Stijn	UNB	Insight Grant	not available - n/a	n/a	n/a	2019-20 to 2023-24	5 years	$500,000	$100,000	Y1
Bomback, Andrea	UNB	Insight Grant	not available - n/a	n/a	n/a	2019-20 to 2021-22	3 years	$69,650	$23,216	Y1
Cormier, Lauren	UNB	Doctoral Award	not available - n/a	n/a	n/a	2019-20 to 2022-23	4 years	$165,000	$41,250	Y1
Poulin, Carmen	UNB	Insight Grant	not available - n/a	n/a	n/a	2019-20 to 2023-24	5 years	$388,159	$77,632	Y1
Landry, Michel	UdM	Canada Research Chair	not available - n/a	n/a	n/a	2019-20 to 2023-24	5 years	$500,000	$100,000	Y1
TOTAL SSHRC								**$2,231,855**	**$572,864**	

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Researcher	Affiliation	Program	Project Title	Pillars	Areas	Period	Duration	Total Funding	2019-20 Funding	Funding Year
NSERC										
Wayne Albert	UNB-Kinesiology	Discovery Grant	Manual material handling performance and fatigue	1	Mobility	2015-16 to 2019-20	5 years	$125,000	$22,620	Y4
Stephen Westcott	MtA	Discovery Grant	To B-E or not to B-E?: Developing New Boranes and Boration Reactions	1	Medicinal Chemistry	2015-16 to 2019-20	5 years	$300,000	$61,000	Y4
Jillian Rourke	MtA	Discovery Grant	Identification and Characterization of Nutrient-Sensing Metabolite GPCRs	1	Diabetes	2019-20 to 2023-24	5 years	$140,000	$28,000	Y1
Christopher Gray	UNB	Discovery Grant	Exploring theendophytic parvome for the discovery of novel biologically active molecular scaffolds	1	Natural Products	2019-20	1 year	$29,000	$29,000	Y1
Luc Boudreau	UdM	Discovery Grant	The expression of the 12-lipoxygenase enzyme as a modulator of platelet-dervied microvescicle production	1	Inflamma-tory Disease	2019-20 to 2023-24	5 years	$115,000	$30,000	Y1
Colpitts, Benjamin H	UNB / HHN-SJRH / DMNB	Masters Award	not available - n/a	n/a	n/a	2019-20	1 year	$17,500	$17,500	Y1
Weir, Jackson	UNB	STEAM Horizon Award	not available - n/a	n/a	n/a	2019-20	1 year	$12,500	$12,500	Y1
Aikens, Janelle	UNB	Masters Award	not available - n/a	n/a	n/a	2019-20	1 year	$17,500	$17,500	Y1
Fournier, Vanessa	UdM	Masters Award	not available - n/a	n/a	n/a	2019-20	1 year	$17,500	$17,500	Y1
Touaibia, Mohammed	UdM	Discovery Grant	not available - n/a	n/a	n/a	2019-20	1 year	$30,000	$30,000	Y1
Dion-Coté, Anne-Marie	UdM	Discovery Grant	not available - n/a	n/a	n/a	2019-20 to 2023-24	5 years	$165,000	$33,000	Y1
F. Olivier Hebert	UdM	Post-doctoral Fellowship	not available - n/a	n/a	n/a	2019-20	1 year	$22,500	$22,500	Y1
Tremblay, Luc	UdM	Discovery Grant	not available - n/a	n/a	n/a	2019-20 to 2023-24	5 years	$125,000	$25,000	Y1
Scheme, Erik	UNB	Engage Grant	not available - n/a	n/a	n/a	2019-20	1 year	$50,000	$50,000	Y1
Ortiz Angulo, Oscar	UNB	Masters Award	not available - n/a	n/a	n/a	2019-20	1 year	$17,500	$17,500	Y1
TOTAL NSERC								**$1,184,000**	**$413,620**	
MITACS										
Shelley Doucet	UNB	Accelerate	A Needs Assessment of Community Resources and Services for People with Cancer and their famlies in NB	4	Cancer	2019-20	1 year	$7,500	$7,500	Y1
Wayne Albert	UNB	Accelerate	Cognitive and Physical Demands of Using Ergonomic Spinner Knobs	4	Mobility	2019-20	1 year	$7,500	$7,500	Y1
Erik Scheme	UNB	Accelerate	Machine Learning for Breath-Based Cancer Diagnosis	1	Cancer	2019-20	1 year	$7,500	$7,500	Y1
Yonghao Ni	UNB	Accelerate	Supercritical Fluid Extraction of Canna-bis for processing into various forms	4	Cannabis	2019-20	1 year	$7,500	$7,500	Y1
Bryan Crawford	UNB	Accelerate	Understanding the contribution of tetrahydrocannbinol and cannabidiol isomers and related compounds to the therapeutic effects and safety of cannabinoids using zebrafish larvae	4	Cannabis	2019-20	1 year	$7,500	$7,500	Y1
Scott Ronis	UNB	Summer Interns	Youth Access to Mental Health Services	3	Mental Health	2019-20	1 year	$6,000	$6,000	Y1
Victoria Chester	UNB	Summer Interns	Motion Capture and Biomedical Data Analysis	1	Mobility	2019-20	1 year	$6,000	$6,000	Y1
Erik Scheme	UNB	Summer Interns	Signal Processing and Machine Learning Applications for wearable and Mobile technologies	4	Mobility	2019-20	1 year	$12,000	$12,000	Y1
Victoria Chester	UNB	Summer Interns	Biomechanical and Physiological Sensor Development	4	Mobility	2019-20	1 year	$6,000	$6,000	Y1
Usha Kuruganti	UNB	Summer Interns	Myoelectric Signal analysis for Neuromuscular Function	4	Mobility	2019-20	1 year	$6,000	$6,000	Y1
Danielle Bouchard	UNB	Summer Interns	Prevention of Falls in Older Adults Through Movements	4	Seniors Health	2019-20	1 year	$6,000	$6,000	Y1
Usha Kuruganti	UNB	Summer Interns	The Assessment of Prolonged Standing on the Work Health of Industrial Populations	4	Occupational Health	2019-20	1 year	$6,000	$6,000	Y1
Jon Sensinger	UNB	Summer Interns	Understanding how people adapt, to improve prosthesis co-adaptation	4	Mobility	2019-20	1 year	$6,000	$6,000	Y1
Anna Ignaszak	UNB	Summer Interns	Development of a Comprehensive HIV Management System	4	HIV	2019-20	1 year	$6,000	$6,000	Y1
TOTAL MITACS								**$97,500**	**$97,500**	
GRAND TOTAL								**$18,841,487**	**$4,656,858**	