



researchNS

Semi-Annual Report
to the Minister of
Labour and
Advanced Education

October 2020 to
March 2021

Stefan Leslie
CEO
Research Nova Scotia 1660
Hollis St., Suite 905 Halifax, NS
B3J 1V7

Table of Contents

01

**Executive
Summary**

Pg. 01

02

**Board of
Directors**

Pg. 03

03

**Considering
our Impact**

Pg. 04

04

**Projects Approved
by the Corporation**

Pg. 14

05

**Financial
Forecast**

Pg. 16

06

**Appendix
A**

Pg. 19

Executive Summary

This report covers the activities of the Research Nova Scotia Corporation (RNS) for the period from 1 October 2020 to 31 March 2021.

The COVID-19 pandemic continued to affect research throughout the province during this period. Many universities restricted access to their campuses, and a number of RNS-funded research projects were delayed, resulting in requests for no-cost extensions.

In addition to these challenges, the pandemic also resulted in incremental investment in federal support for research. New funds to the Tri-Agencies, the Canada Foundation for Innovation, and Genome Canada, for instance, provided Nova Scotia researchers with new awards and collaboration opportunities.

This is the fourth semi-annual report produced by RNS, and the six-month period on which each reported has included significant developments in the growth of the new organization. In this reporting period, two significant new areas of work were developed.

First, we began working on three new initiatives designed to bring focus and attention to important research areas. We are now actively engaged on identifying climate and forestry research, working in partnership with provincial organizations in each area. The third initiative is a partnership with Engage Nova Scotia that will improve the connection of research to the African Nova Scotian community. All of these are important groundwork: they are laying the foundation for a better targeting of future research investments to missions critical to the future of Nova Scotia.

Second, we initiated our first three 'convened projects'; these are projects in which RNS is actively engaged in shaping the scope and direction of the research, working alongside partners and the researchers themselves to maximize the value of the work to Nova Scotia. The engine of research will always be the creativity, drive and capabilities of the researchers. But in each case, the research scope overall in these convened projects has been tuned and improved, which in turn has better supported our researchers.

In addition to these new developments, we continue to manage and evaluate the projects which were previously funded by RNS and which continued in this reporting period, along with those funded under our predecessor organizations, the Nova Scotia Health Research Foundation, the

Nova Scotia Research and Innovation Trust, and the Research Nova Scotia Trust. In this report, we are proud to profile the impacts of projects from both legacy programs and recent initiatives.

During this reporting period, RNS committed \$14.40 million across 42 new projects, leveraging approximately \$18.51 million (cash) and \$5.58million (in-kind) from partners. In addition, 17 undergraduate student research projects were supported through the Scotia Scholar program.

Board of Directors

The current members of the Research Nova Scotia Board of Directors are:

Dr. Alice Aiken (Chair), Vice-President, Research and Innovation, Dalhousie University

Mr. Don Bureaux, President, Nova Scotia Community College

Ms. Ava Czapalay, CEO and Deputy Minister, Office of Immigration and Population Growth

Mr. David Dingwall, President, Cape Breton University

Ms. Jeannine Lagassé, Associate Deputy Minister, Department of Health and Wellness

Ms. Denise LeBlanc-MacDonald, Director General, Aquatic & Crop Resource Development, National Research Council

Mr. Bernie Miller, Deputy Minister, Office of Strategy Management

Dr. Nicholas Nickerson, Chief Scientist and Co-Founder, Eosense

Dr. Jeffrey Norrie, Chief Science Officer, Breathing Green Solutions

Mr. Allister Surette, President, Université Sainte-Anne

Dr. David Woolnough, retired researcher

Note: Dr. Mary Bluehardt, former President and Vice-Chancellor of Mount Saint Vincent University, resigned as a Director and Vice-Chair of the Research Nova Scotia Board of Directors in March 2021.

Considering our Impact

RNS continues to manage and evaluate the projects funded under our predecessor organizations, the Nova Scotia Health Research Foundation and the Nova Scotia Research and Innovation Trust, as well as those projects funded under the Research Nova Scotia Trust. Here, several projects funded by these legacy programs as well more recent initiatives, including two that RNS convened in response to the COVID-19 pandemic, are profiled to demonstrate the impact of supporting research.

The Power of Convening: COVID-19

A mission-oriented approach uses a portfolio of actions across disciplines to achieve a bold, inspirational, and measurable goal with impact for society and policymaking. An important part of this approach aims to convene the different parts of the ecosystem around shared goals. Over the last year, for example, Research Nova Scotia has invested significant resources to provide opportunities for researchers to contribute to combatting the COVID-19 pandemic in meaningful ways. Since the beginning of the pandemic in March 2020, RNS has provided funding to 21 COVID-19-related research projects through a variety of mechanisms.

One of the roles RNS has assumed is to bring researchers together to consider some of the key issues Nova Scotia is facing as a result of the pandemic. For the two projects described below, RNS worked with the provincial government and researchers to help shape the direction, scope, and scale of the research to focus on provincial priorities.

Tracking the Virus in Wastewater

Principal Investigators	Dr. Graham Gagnon & Dr. Amina Stoddart
Institution	Dalhousie University
RNS funding contribution	\$851,730
Leveraged funding	N/A
Sector	Engineering
Number of jobs supported	8.5
Number of training opportunities	4

Dr. Graham Gagnon and his research team at Dalhousie University, along with researchers from Acadia, Cape Breton and St. Francis Xavier Universities and Halifax Water, launched a project aimed at detecting the presence of the virus that causes COVID-19 in human wastewater, with the aim of identifying the presence of the virus quickly – even before it is detected through individual testing.

Building on the results of a pilot study, the research team was able to deploy quickly and has been actively collecting samples in locations throughout Nova Scotia. Sample sites were selected by the research team in collaboration with provincial public health officials and Nova Scotia Health, who continue to be engaged in the project, as well as the municipal utilities and site engineers.

Together we are working to develop a wastewater surveillance program on a provincial scale that would provide early and accurate detection of SARS-CoV-2. Ultimately, this could enable proactive and preventative COVID-19 health and economic response measures.

RNS has committed almost \$852,000 to this project.

To learn more about the work of Dr. Gagnon and his team, listen to the Research Nova Scotia podcast, Episode 7: Testing the Wastewaters: Researchers Develop a Fast and Effective Method for Detecting SARS-CoV-2 on www.researchns.ca.

Protecting Residents in Long-Term Care

Principal Investigator	Dr. Kenneth Rockwood
Institution	Nova Scotia Health
RNS funding contribution	\$1,649,891
Leveraged funding	N/A
Sector	Health
Number of jobs supported	5
Number of training opportunities	2

Nova Scotia has the highest proportion of seniors in Canada. Investing in high quality and safe solutions for long-term care facilities is an important healthy aging strategy here and around the world. RNS worked with Dr. Kenneth Rockwood and his team of researchers, Nova Scotia Health, and government stakeholders to shape a project to determine whether UV lights installed in long-term care facilities will reduce influenza-like illnesses, respiratory infections, and COVID-19 infections among residents.



Dr. Kenneth Rockwood

In addition to studying their effectiveness, the research will also evaluate how residents, staff, families, and facilities, respond to the UV lights and how costs compare to other available infection prevention options. This will enable the rapid deployment of Far-UVC lighting in other long-term care facilities across the province, should the new technology prove to be sound.

Impact Through Reconciliation

Principal Investigator	Dr. Margot Latimer
Institution	Dalhousie University
RNS funding contribution	\$73,335
Leveraged funding	\$676,665
Sector	Indigenous Health
Number of jobs supported	2 FTE (plus 2 Elders, 1 Knowledge Keeper)
Number of training opportunities	4
First funding agency	Canadian Institutes of Health Research

Dr. Margot Latimer understands the importance of creating opportunities for reconciliation within the healthcare system. For more than 15 years, she’s worked directly with First Nations

community members as a nurse, a research partner, and an advocate for advancing Indigenous knowledge in education, research, and practice. In May 2020, she was awarded Nova Scotia's first Indigenous Nursing Research Chair. An initiative of the Canadian Institute of Health Research, the Chair was created to foster health systems that practice and promote culturally safe care. Research Nova Scotia is the provincial funding partner for this award, which supports our mission to care for vulnerable populations and promote future health and wellbeing under our Healthy People and Health Care Systems pillar.



Dr. Margot Latimer

Dr. Latimer first became involved in Indigenous health knowledge mobilization and research in 2008 after she and her colleagues on the IWK Health's Complex Pain Team made a startling observation: only an estimated two out of 800 children ever referred to the Centre were Indigenous. In response, the Aboriginal Children's Hurt and Healing (ACHH) Initiative was born.

In partnership with the Eskasoni Health Centre and a team of Indigenous community leaders, clinicians, Elders, and researchers from IWK Health and Dalhousie University, the ACHH strives to bridge the gap in the health system's understanding of Aboriginal children's pain and hurt. Their research suggests the assessment processes currently used in hospitals and clinics do not reflect how Indigenous youth experience and communicate pain. Rather, the youth prefer to express their pain through storytelling. This finding highlighted the need for a culturally relevant communication tool and led to the creation of the [Kids Hurt App](#) - an interactive way to measure pain.

Dr. Latimer says the Indigenous Nursing Research Chair, which includes approximately \$1 million in funding over five years, will continue to support the development, implementation, and evaluation of the Kids Hurt App. It's not intended that the app will be used for diagnosis, but for Indigenous youth to use in doctors' offices, clinics, and emergency room settings for enhanced communication with care providers. Over the past year, the app has been piloted in multiple First Nation communities in Mi'kma'ki and is scheduled to be tested at the Winnipeg Children's hospital for use with both Indigenous and non-Indigenous youth. Recent revisions include the ability to capture emotional as well as physical pain and ability to translate from the Mi'kmaw language.

The Kids Hurt App is about empowering Indigenous families and communities to use their own knowledge to create safer spaces and places, according to Dr. Latimer. Next steps include exploring the app’s use as a diary for documenting chronic pain. After testing is complete, the app will be made freely available to First Nation community members and health professionals.

Impacting Communities through Research

Principal Investigator	Dr. Etienne Mfoumou
Institution	Nova Scotia Community College
RNS funding contribution	\$42,000
Leveraged funding	\$119,125
Sector	Engineering
Number of jobs supported	3
Number of training opportunities	7
First funding agency	Natural Sciences and Engineering Research Council

Nova Scotia Community College (NSCC) is “the college for community”, according to Dr. Etienne Mfoumou, head of its Applied Engineered Technologies Research lab. For him, it’s most rewarding when NSCC can help a community improve through research and innovation.

Over the past several years, Dr. Mfoumou has been collaborating with residents, community groups, and the Town of Shelburne, along with researchers at Acadia, Dalhousie, and Université Ste-Anne, to test technology to improve the quality of drinking water for residents of the south end of Shelburne, where contaminated well water has been a challenge for many years. NSCC responded to the technical challenges by obtaining research support first from the Natural Sciences and Engineering Research Council (NSERC) and later from the Social Sciences and Humanities Research Council (SSHRC) to explore the feasibility of using ultrafiltration technology to reduce harmful bacteria in these wells. RNS contributed to this work, which fits under our strategic pillars of Healthy People and Health Care Systems and Improved Quality of Life for Nova Scotians, by providing funds to support the cost of water sample analysis and to enable NSCC students to participate in the project.

The project demonstrated that ultrafiltration, a chemical free process that operates at an advanced level, as compared to traditional filter technologies, was effective in improving the quality of well water in south end Shelburne. In addition to testing ultrafiltration's efficacy, ensuring its usability was a priority for Dr. Mfoumou and his team. Designed to be low maintenance, the technology was customized for and tested at both the household and community level.

Approximately 40% of Nova Scotians are reliant on wells, which can pose challenges for water safety and security. Dr. Mfoumou hopes the work in Shelburne will demonstrate that ultrafiltration could be implemented in communities across the province to improve the quality of drinking water drawn from wells.



The Impact of Investing in Infrastructure

Principal Investigator	Dr. Marcia English
Institution	St. Francis Xavier University
RNS funding contribution	\$86,625
Leveraged funding	\$86,626
Sector	Food Chemistry/Agriculture
Number of jobs supported	0
Number of training opportunities	30
First funding agency	Canada Foundation for Innovation

With rising global demand for plant-based protein, pulses (e.g., beans, peas, lentils) have attracted new interest as a high-quality source. Farming of these crops in most Canadian provinces, including Nova Scotia, has increased over the last 10 years, and Canada is considered a leader in terms of crop production and exports.

Deriving products from these crops to be used as ingredients for many high-value foods and nutraceuticals is big business and has the potential to be even bigger. However, a persistent issue has been plaguing the industry – “off” flavours and aromas: consumers want more plant-based protein, but they aren’t willing to compromise on taste. That’s where Dr. English comes in.

Dr. Marcia English is an Assistant Professor in Human Nutrition at St. Francis Xavier University (St. F.X.) where she heads up the X Food Research Lab. Working with local businesses, she realized that in order for pulse farmers to take full advantage of the international market, and for businesses to develop profitable, value-added products, the problems with flavour and aroma had to be resolved. Her research program required access to specialized infrastructure that wasn’t available in Nova Scotia, so acquiring a Gas Chromatography mass spectrometer (GCMS) for her lab became a priority. RNS matched funding from the Canada Foundation for Innovation (CFI) to support the purchase and installation of this specialized equipment, customized with an olfactory port, in Dr. English’s lab in Antigonish. For RNS, the project advances multiple missions under the Sustainable Bioeconomy strategic pillar, improving processes and innovating products for new markets.

In just a few years, Dr. English's work has identified the compounds that impact taste and aroma and she is working on non-chemical methods to reduce or change them. She is putting the finishing touches on a paper that will share her findings.

The GCMS has opened other doors as well; she is now collaborating with researchers at Agriculture and Agri-Food Canada, Mount Saint Vincent, and Acadia, in addition to colleagues at St. F.X., on other food projects such as biodegradable packaging made from food waste (their latest experiment is using lobster shells), and wine. She notes that this work and access to the GCMS has provided many opportunities to involve students in her research and to partner with local industry to add value to Nova Scotia's farming and food production community.



Impacting Research Capacity: Scotia Scholars

Principal Investigator	Ksenia Kholina
Institution	Mount Saint Vincent University
RNS funding contribution	\$20,000
Leveraged funding	N/A
Sector	Health
Number of jobs supported	N/A
Number of training opportunities	N/A
Primary funding agency	Research Nova Scotia

Research Nova Scotia offers the Scotia Scholars Award program in partnership with the Department of Health and Wellness to provide financial support to research trainees with exceptional potential engaged in health research at participating Nova Scotia institutions. Scotia Scholars lead a project under the supervision of an experienced health researcher, thus building their own and the province’s capacity for health research.

Ksenia Kholina exemplifies the objectives of the program. Ksenia was trained as a medical doctor in her native Russia, but through her clinical work, came to understand that making a true impact on chronic diseases would be achieved only through prevention. Her journey to learn how to prevent illness brought her to Nova Scotia to study human nutrition at Mount Saint Vincent University (MSVU).

As an international student, Ksenia was ineligible for most of the studentships available to her peers, but the criteria for the Scotia Scholars Awards requires only that a student be resident in Nova Scotia for the duration of the grant. The funding enabled her to work with MSVU assistant professor and researcher, Dr. Kyla Whitfield, in her Milk and Micronutrient Assessment (MAMA) Lab. There, she was able to acquire the research skills that enabled her to not only complete her own project but to contribute to the others being conducted in the lab.

Dr. Whitfield says the Scotia Scholars Award program enables her to attract promising students, such as Ksenia. She notes that for the province's smaller universities which may not have access to internal funds to support students, the program is even more critical for attracting and keeping the best trainees in Nova Scotia. When asked about how the award impacted Ksenia, Dr. Whitfield says she believes the wide range of experiences she had in the MAMA Lab lit a "fire for research" in Ksenia and helped her define what she wants to do in the future.



Ksenia Kholina

Although she encountered delays in gathering data due to the COVID-19 pandemic, Ksenia is now on track to defend her thesis this summer and is working on several papers she hopes to have published this year. She credits the Scotia Scholars Awards program for giving her the time and experiences to discover her true passions – research through a

feminist lens, infant nutrition as the foundation of human health, and turning evidence into practice. "Having access to this funding meant I could spend more time in the lab where I have learned so much and have come to value research." Ksenia's future plans include becoming a registered dietician, with the goal of continuing research based on her clinical observations, then bringing the results back into her practice.

Projects Approved by the Corporation

Over the last six months, RNS supported 55 research projects through its Research Opportunities Fund and the Scotia Scholars Awards program.

From 1 October 2020 to 31 March 2021, the following commitments were made:

RNS Commitments

Program	Type	# Funded	Total Investment
Research Opportunities Fund	Matching Funds	15	\$9,285,752
New Health Investigator Grant	Capacity Building	22	\$2,132,048
Partnerships	Convened	1	\$45,000
COVID-19 Rapid Response	Matching Funds	1	\$125,000
Strategic Initiatives	Convened	3	\$2,811,691
Scotia Scholars (Undergraduate)	Capacity Building	17	\$83,000
		59	\$14,482,491

Appendix 1 details each project approved by the Corporation during the reporting period, including the following information on each research project:

1. Name of the lead applicant
2. Name of the lead institution or organization
3. Name of the project
4. Amount of funding approved
5. Research sector

6. Estimated number of jobs in Nova Scotia that will be supported by the funding awarded to the project
7. Estimated number of training opportunities for students and others in Nova Scotia that will be supported by the funding awarded to the project
8. Information about any funding that the project received from other sources, including the following:
 - a. The name of each source, and
 - b. The amount received from each source and whether it was in the form of cash or an in-kind contribution.

As part of the funds awarded in this time period, RNS invested in building research capacity in 17 students through its Scotia Scholars program. Scotia Scholars supports trainees at the undergraduate, Masters and PhD levels to work on a specific research project with faculty mentors. Awards for the undergraduate program, which were confirmed in March 2021, ranged from \$4800 to \$5000.

The 17 newest Scotia Scholars are enrolled at Cape Breton University, Nova Scotia Community College and St. Francis Xavier University. It is worth noting that this competition marked the first time the Community College has participated in the program.

The competition for Masters and PhD students will be completed by the end of May 2021. Awards for these students will be issued in time for the start of the September term. The Atlantic School of Theology is piloting an award for its Masters level students in 2021; it's AST's first time participating in Scotia Scholars.

Financial Forecast

This section includes the following:

1. The current balance in the Research Opportunities Fund (ROF) and the amount anticipated to be paid from the Fund over the next 6 months;
2. The amount spent on operations from October to March 2021, and the amount anticipated to be spent on operations over the next 6 months;
3. The amount anticipated to be spent from the ROF and for Operations for the period 01 April 2021 to 30 September 2021.

	Committed Oct 2020 - Mar 2021	Previous commitments expensed Oct 2020 – Mar 2021	Current Balance	Anticipated spending Apr – Sept 2021
ROF	\$12,267,000	\$5,084,000	\$28,661,000	\$4,835,000
Health Research	\$2,215,000	\$1,239,000	N/A	\$790,000
Operations	\$848,000	N/A	N/A	\$900,000

The \$17,351,000 of spending for the period from October 2020 to March 2021 included expenditures from the ROF for projects approved in previous years, and projects approved between October 2020 and March 2021. These were \$12,267,000 and \$5,084,000, respectively.

The anticipated spending for the first half of this year (\$4,835,000) is comprised of five categories of grants:

1. CFI JELF Grants \$1.545 million: two rounds of CFI JELF grants are expected in the first half of 2021-22. The projections are based on the applications that have been submitted to CFI by the universities and NSCC.

2. Convened Projects \$1.5 million: RNS remains committed to aligning projects to our missions and has therefore set aside a total of \$3 million in FY2022 for research studies to be convened by RNS.
3. Other Matching for Federal Grants \$1 million: This amount is set aside for contributing to projects funded by competitions which are not yet announced. These competitions may include ongoing research related to the COVID-19 pandemic.
4. Student Awards \$790,000: The Scotia Scholars program is offered for health research trainees at the undergraduate, Masters, and PhD levels, based on recommendations from each eligible institution. This program remains largely unchanged from previous years, but its budget was increased for FY2022 to enable additional institutions to take part.

researchNS

researchns.ca

researchNS

Appendix A

Funded October 1, 2020 – March 31, 2021

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
RESEARCH OPPORTUNITIES FUND									
Wire Arc Additive Manufacturing of Large-Scale Parts from Stainless Steels and Corrosion Resistant Alloys	Ali Nasiri	Dalhousie University	\$100,000	Manufacturing/Oceans	0.0	15.0	CFI, Industry	\$100,000 (CFI)	\$54,362 (Industry partners)
Pyrrrole Chemistry for Chemical Biology and Energy	Alison Thompson	Dalhousie University	\$700,000	Health	0.0	20.0	CFI, Industry	\$700,000 (CFI) \$164,877 (Dalhousie)	\$425,303 (Industry partners)
Sexual Health And Gender (SHAG) Research Program	Matthew Numer	Dalhousie University	\$113,251	Social Change/Health	0.0	0.0	CFI, Faculty of Health, Industry	\$113,251 (CFI) \$1,526 (Applicant Startup Fund) \$39,163 (Faculty of Health)	\$15,933 (Industry partners)
Optimizing the Measurement and Management of Infant Pain: A Translational Clinical Program of Research	Britney Benoit	St. Francis Xavier University	\$62,566	Health	0.5	7.0	CFI, Industry	\$62,566 (CFI) \$4,795 (St. FX)	\$26,490 (Industry partners)

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
Advanced Materials for Energy Applications	Ghada Koleilat	Dalhousie University	\$100,000	Renewable Energy	0.0	10.0	CFI	\$100,000 (CFI) \$3,530 (Dalhousie)	\$48,021 (Industry partners)
The Mount Food Research Centre	Bohdan Luhovyy	Mount Saint Vincent University	\$122,326	Health	0.0	30.0	CFI	\$122,326 (CFI) \$4,501 (MSVU)	\$56,663 (Industry partners)
Hybrid Simulation of Self-Repairing Concrete Structures	Fadi Oudah	Dalhousie University	\$100,000	Civil Engineering	0.0	6.0	CFI, Center for Innovation in Infrastructure, Department of Civil and Resource Engineering	\$100,000 (CFI) \$12,570 (Applicant Startup Fund) \$10,000 (Center for Innovation in Infrastructure) \$10,000 (Department of Civil and Resource Engineering)	\$55,400 (Industry partners)
An Interdisciplinary Neuroscience Approach to Reducing the Burden of Early Life Stress	Jennifer Khoury	Mount Saint Vincent University	\$87,611	Health	0.0	0.0	CFI	\$87,611 (CFI) \$19,566 (MSVU)	\$24,240 (Industry partners)
Observing oceanic turbulence using an autonomous glider	Ruth Musgrave	Dalhousie University	\$85,001	Oceans	0.0	6.0	CFI, National Science Foundation	\$125,000 (CFI) \$11,117 (National Science Foundation)	\$78,953 (Industry partners)
Research infrastructure to support molecular and imaging applications	Vielka Salazar	Cape Breton University	\$74,997	Fisheries and Aquaculture	0.0	0.7	CFI	\$74,997 (CFI) \$5,000 (CBU)	\$32,499 (Industry partners)

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
Atlantic Cancer Consortium: Development of an integrated foundation for precision medicine for the Atlantic Region with a focus on colorectal cancer and lung cancer	Robin Urquhart	Nova Scotia Health	\$250,000	Health	6.5	16.0	Terry Fox Research Institute, New Brunswick Health Research Foundation, MITACS, Beatrice Hunter Cancer Research Institute, Memorial University, Roche Canada Rewrite Cancer Challenge, Astra Zeneca, Provincial Partners	\$1,500,000 (TFRI) \$300,000 (NBHRF) \$263,988 (MITACS) \$425,350 (BHCRI) \$50,000 (Roche Canada) \$100,000 (Astra Zeneca) \$1,385,000 (Provincial Partners)	\$84,000 (BHCRI) \$44,271 (MUN)
Four Projects to be Determined *	TBD	TBD	\$7,490,000	TBD	TBD	NBD	CFI Innovation Fund	\$11,410,817	\$5,239,308
NEW HEALTH INVESTIGATOR GRANT									
Mode of delivery following a previous caesarean birth: identifying risk factors for maternal and neonatal morbidity	Azar Mehrabadi	IWK Health Centre	\$99,764	Health	2.0	1.0	N/A	N/A	N/A

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
Harnessing oral microbiota to prevent chemotherapy-induced oral mucositis: functional screening using a bioprinted mammalian-microbe co-culture model	Brendan Leung	Dalhousie University	\$99,600	Health	1.0	2.0	N/A	N/A	N/A
Provincial implementation of the Baby-Friendly Initiative: A collaborative, theoretically driven study	Britney Benoit	St. Francis Xavier University	\$99,989	Health	5.0	7.0	N/A	N/A	N/A
Designing an integrated pediatric inpatient-ambulatory care service delivery model	Christine Cassidy	Dalhousie University	\$99,682	Health	1.0	1.0	N/A	N/A	N/A
Differences in the Regulation of Behaviour Genes as a Proposed Mechanism for Mental Illness	Deniz Top	Dalhousie University	\$100,000	Health	2.0	1.0	N/A	N/A	N/A
Role of stress granule formation in immune responses to respiratory viruses	Denys Khaperskyy	Dalhousie University	\$99,980	Health	2.0	3.0	N/A	N/A	N/A

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
Primary Healthcare for People with Dementia: Exploring Care Provided by Collaborative Family Practice Teams in Nova Scotia	Elaine Moody	Dalhousie University	\$89,489	Health	0.4	0.4	N/A	N/A	N/A
Screening, self-management and referral to treatment for young cannabis users: fulfilling an unmet need	Igor Yakovenko	Dalhousie University	\$99,657	Health	1.0	2.0	N/A	N/A	N/A
An Explainable Machine Learning to Dissect Geographical Disparities in Cancer Incidence and Mortality Rates in Canada	Jamileh Yousefi	Cape Breton University	\$100,000	Health	2.0	2.0	N/A	N/A	N/A
Preterm Infant Gut microbiome associations with Environment and Outcomes in the NICU (PIGEON)	Jon Dorling	IWK Health Centre	\$99,625	Health	1.0	0.0	N/A	N/A	N/A

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
Strengthening alcohol policies on Atlantic Canadian campuses: Working collaboratively to reduce alcohol-related harm among students	Kara Thompson	St. Francis Xavier University	\$99,835	Health	3.0	3.0	N/A	N/A	N/A
Cardiac vascular stem cells in right heart failure	Ketul Chaudhary	Dalhousie University	\$100,000	Health	0.6	2.0	N/A	N/A	N/A
Does a simple blood test predict who needs strict blood sugar control to prevent heart disease?	Leah Cahill	Nova Scotia Health	\$93,381	Health	0.0	2.0	N/A	N/A	N/A
"Can Magnetic Resonance Imaging of the Prostate combined with a Radiomics Evaluation Determine the Invasive Capacity of a Tumour (Can MRI-PREDICT)"	Michael Kucharczyk	Nova Scotia Health	\$97,683	Health	0.3	0.2	N/A	N/A	N/A

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
Community-based services for individuals with developmental disabilities: Transition to adult care	Parisa Ghanouni	Dalhousie University	\$100,000	Health	2.0	4.0	N/A	N/A	N/A
Identifying, Understanding, and Mitigating Gaps in Dementia Care	Paula McLaughlin	Nova Scotia Health	\$98,882.97	Health	1.0	3.0	N/A	N/A	N/A
Exploring current nutritional knowledge and resources available to people living with HIV-AIDS in Nova Scotia: A Comprehensive needs assessment	Phillip Joy	Mount Saint Vincent University	\$99,785.60	Health	4.0	4.0	N/A	N/A	N/A
Using activity monitors to improve virtual care for individuals at risk of obesity and cardiovascular disease living in rural areas of Nova Scotia	Ryan Reid	St. Francis Xavier University	\$78,813	Health	4.0	4.0	N/A	N/A	N/A

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
An App Responding to Behaviour of People to Promote Mental Wellbeing in Anxious Youth	Sandra Meier	IWK Health Centre	\$100,000	Health	2.0	5.0	N/A	N/A	N/A
The Feasibility of a Program for the Prevention of Childhood Sexual Abuse	Skye Stephens	Saint Mary's University	\$77,303.96	Health	2.0	1.0	N/A	N/A	N/A
Home Food Gardening in Response to the Covid-19 Pandemic: Lessons for Food Security Considerations	Sylvain Charlebois	Dalhousie University	\$98,668	Health	5.0	5.0	N/A	N/A	N/A
Resilience and impairment: A study of factors supporting counsellor development and career longevity	Tanya Surette	Acadia University	\$99,909.56	Health	4.0	4.0	N/A	N/A	N/A
PARTNERSHIPS									
Bringing Community and Research Together	Engage Nova Scotia	Engage Nova Scotia	\$45,000	Quality of Life	1.0	0.0	Engage Nova Scotia	N/A	N/A

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
COVID-19 RAPID RESPONSE									
Development of Preclinical and Clinical models of COVID-19 Disease for Vaccine, Antiviral, and Immuno-therapeutic Testing	David Kelvin	Dalhousie University	\$125,000	Health	0.0	12.0	CFI, Industry	\$1,200,000 (CFI)	\$90,221 (Industry partners)
STRATEGIC INITIATIVES									
Wastewater Surveillance of SARS-CoV-2 in Nova Scotia	Graham Gagnon	Dalhousie University	\$851,730	Health	8.5	4.0	N/A	N/A	N/A
Far-UVC Trial in Long-term Care in Nova Scotia	Kenneth Rockwood	Nova Scotia Health Far UV Light Technologies	\$1,339,132 \$310,759	Health	5.0	2.0	N/A	N/A	N/A
Bio-Efficacy of Wood Vinegar on Fire Blight and Scab Fungi Diseases Damaging Apple and Pear Trees in Nova Scotia	Lord Abbey	Dalhousie University	\$310,070	Agriculture	0.0	8.0	SynerTek Ltd, Rod McKenney Farm	N/A	\$86,484 (SynerTek) \$164,625 (Rod McKenney Farms)

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
SCOTIA SCHOLARS (UNDERGRADUATE)									
Value of Youth Serving Organizations to CBRM Youth and Communities	Alissa Power	Nova Scotia Community College	\$5,000	Health	N/A	N/A	N/A	N/A	N/A
The Overpass Program- Bridging the Gap in Mental Health Services	Joe Townsend	Nova Scotia Community College	\$5,000	Health	N/A	N/A	N/A	N/A	N/A
Bridging the Gap - Adaptive Equipment Loan Program in the Valley Region Research	Kimberly Halliday	Nova Scotia Community College	\$5,000	Health	N/A	N/A	N/A	N/A	N/A
Value of Youth Serving Organizations to CBRM Youth and Communities	Samantha Bonnar	Nova Scotia Community College	\$5,000	Health	N/A	N/A	N/A	N/A	N/A
Proof-of-concept: Anaerobic SERS-based lateral flow assays for ultrasensitive diagnosis of infectious disease	Minh Ngoc Pham	Cape Breton University	\$5,000	Health	N/A	N/A	N/A	N/A	N/A

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
Understanding the care Primary Care Providers (PCP's) provide to men from the Human Papillomavirus (HPV).	Noah Doucette	Cape Breton University	\$5,000	Health	N/A	N/A	N/A	N/A	N/A
Returning to work after pregnancy loss	Taegen McPhee	Cape Breton University	\$5,000	Health	N/A	N/A	N/A	N/A	N/A
The Gene-Environment Interaction Between Abnormal Sleep and Circadian Disruption and its Impact on Atlantic Canada's High Rate of Colorectal Cancer	Alison Walsh	St. Francis Xavier University	\$4,800	Health	N/A	N/A	N/A	N/A	N/A
The Association Between the Strength of Functional Connectivity Within the Default Mode Network and Saliency Networks and Superior Memory Capability in Superagers Versus Typical Older Adults	Haley Keenan	St. Francis Xavier University	\$4,800	Health	N/A	N/A	N/A	N/A	N/A

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
Exploring student athletes understanding and management of exercise-associated gastrointestinal symptoms: A mixed methods approach	Hannah Ellis	St. Francis Xavier University	\$4,800	Health	N/A	N/A	N/A	N/A	N/A
Curriculum of Care: Investigating the Representation of Persons with Disabilities in Eastern Canadian Medical School Curriculum	Kate Graham	St. Francis Xavier University	\$4,800	Health	N/A	N/A	N/A	N/A	N/A
Understanding Social & Structural Determinants of University Student Mental Well-Being & Social Connectedness During Public Health Emergencies	Katelyn (KC) Mooney	St. Francis Xavier University	\$4,800	Health	N/A	N/A	N/A	N/A	N/A
Mapping the Participant Experience in Controlled Human Infection Model Trials: A Modified Grounded Theory Study	Krista Whitfield	St. Francis Xavier University	\$4,800	Health	N/A	N/A	N/A	N/A	N/A

Project	Researcher	Institution	RNS Funding	Sector	# of Jobs Created (FTE)	# of Training Opportunities	Partners	Cash	In-Kind
The Normalization of Eating Disorders Among Female Distance Runners	Meaghan Boatsmith	St. Francis Xavier University	\$4,800	Health	N/A	N/A	N/A	N/A	N/A
Investigating the Health Impacts of Simultaneous Alcohol and Cannabis use	Rachael Macdonald-Spracklin	St. Francis Xavier University	\$4,800	Health	N/A	N/A	N/A	N/A	N/A
Development of a Canadian Nutrient Composition Database for Gluten-Free Foods	Samantha Fisher	St. Francis Xavier University	\$4,800	Health	N/A	N/A	N/A	N/A	N/A
Integrated Youth Mental Health Services: An Examination of Best Practices	Yu Li	St. Francis Xavier University	\$4,800	Health	N/A	N/A	N/A	N/A	N/A
TOTALS			\$14,482,491		66.8*	193.3*		\$18,507,551	\$5,580,638

Figures for employment and training opportunities for the four CFI Innovation Fund projects will be added once funding contributions are finalized.