



OFFICE OF  
RESEARCH AND  
GRADUATE STUDIES

# **Cape Breton University Annual Research Report 2023**

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## Introduction

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Cape Breton University is pleased to provide its Annual Research Report as an update of internal and external investments in research at CBU. The Report examines the fiscal year, covering the period of **April 1, 2022 to March 31, 2023**.

A focus on implementation of the [Strategic Research Plan 2020-2025](#) continued, with growth in student engagement in research, enhanced research infrastructure, and a strong focus on collaboration across the institution and within communities.

CBU provided research support through internal funding, especially important for new faculty. New tenure-track faculty have access to a Start-Up Research Grant, available within their first two years. Additional funding is also available through the internal RISE program (Research, Innovation, Scholarship and Education).

Funding from the Canada Foundation for Innovation, Research Nova Scotia, and Canadian Tri-Agencies (CIHR, SSHRC, NSERC) provided support for an incredible range of research pursuits and successes. Internal Research Chairs were supported with a SSHRC grant, with three faculty conducting research in social sciences and humanities.

Researchers at CBU continue to impact global issues through local research, including studies on affordable housing, artificial intelligence, water quality and the environment, healthy aging, plagiarism prevention, land use planning and food security.

## Research Highlights

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This reporting period is one with significant developments at CBU. The most noteworthy is the announcement of a Cape Breton Medical Campus, in partnership with Dalhousie University Medical School. The Cape Breton Medical Campus will open in the fall of 2025.

CBU celebrated research with presentation of the annual research awards, with the addition of the inaugural Margaret Dechman Community-Engaged Research Champion Award. This legacy award honours the late Dr. Margaret Dechman, a CBU professor of sociology who advocated for social justice and challenged the politics of exclusion. This award was designed to recognize both CBU faculty and community-based researchers, inviting nominations of external researchers. The inaugural award was presented to community member Janet Bickerton, health co-ordinator for the Ally Centre of Cape Breton and registered nurse with Nova Scotia Health.

Turning to student research, CBU was successful in an application to Scotia Rise, a community funding opportunity provided by Scotia Bank. In the fall of 2022, funds were secured to support



the Community-Student Research Connections Program for three years, connecting students with community groups and small businesses with research needs. This student program, combined with the Undergraduate Student Scholar Award, allows CBU to offer enhanced student research experience.

While the report’s primary function is to provide a summary of research funding at CBU, it provides an opportunity to feature examples of these investments at work, demonstrating the diverse contributions of CBU researchers.

## External Research Funding

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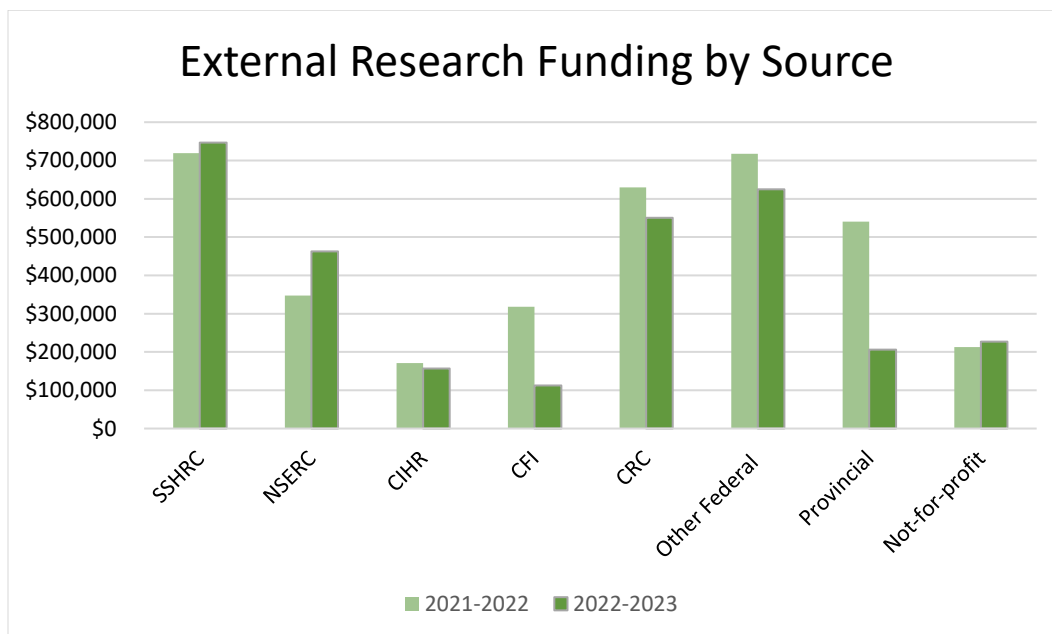
CBU’s research funding continues to indicate a thriving research community. The total investment of all external sources exceeds \$3 million.

Tri-agency support for research at CBU approached \$1.4 million, with an increase of \$92,000 from NSERC. While CHIR funding dipped slightly, researchers attracted additional funds from SSHRC, with a total of \$746,000 to support social science and humanities research, an increase of \$27,000 from the previous year.

The reduction in CFI is also reflected in the decline in provincial funding, with Research Nova Scotia’s CFI matched funds reduced proportionately. An additional reduction of \$80,000 is noted in the Canada Research Chair funding, as CBU’s Dr. Heather Sparling completed a second and final term in that role.

A delay in a transfer of funds from the New Frontiers in research is reflected in a decline in other federal funding acquired during this period. Also cause for decline, a transfer of NRCAN funds occurred when a faculty member relocated to another university, where the funding was reallocated. With these two factors considered, overall federal funding remains relatively consistent with the previous year.

**Figure 1: CBU Research Funds by Source**



**Table 1: Total amount awarded by source for 2022-2023, compared to previous year (rounded down to the nearest hundred)**

Funding Sources	Total 2021-2022	Totals 2022-2023
SSHRC	\$719,400	\$746,380
NSERC	\$347,200	\$462,225
CIHR	\$171,300	\$157,080
CFI	\$317,822	\$112,343
CRC	\$630,000	\$550,000
Other Federal	\$717,100	\$625,022
Provincial	\$540,000	\$206,307
Not-for-profit	\$212,500	\$227,348

There are numerous success stories behind the numbers. Below we feature several examples of research across disciplines at CBU.

### CBU Research Centre Supports National Dementia Study

CBU’s Centre of Excellence for Healthy Aging participated in its first research project during this fiscal year. The project, CAN-THUMBS UP (The Canadian Therapeutic Platform Trial for Multidomain Interventions to Prevent Dementia), engaged people across Canada in the study, with CBU’s Centre coordinating the research in Nova Scotia and Prince Edward Island. Progress since the Centre’s inception also includes creation of an Affiliated Researcher Committee. It is comprised of faculty from across disciplines, as well as community collaborators.

### Biology Lab Instructor Dedicated to Research

CBU Senior Lab Instructor Kellie White doesn’t have a requirement to conduct research as part of her teaching role with the biology department. That’s one reason her research is noteworthy. White maintains a consistent pursuit of knowledge around aquatic environments and the species that reside there. With funding support from Mitacs Accelerate, White continued this important research this year. The funding allowed her to hire a CBU student, who assisted with a project titled: *The fate*



*of dissolved metals in lakes containing fresh water mussels.* The lampmussel is a freshwater mollusk found in three Cape Breton lakes. White was recognized by Nova Scotia Fisheries and Aquaculture and Fisheries and Oceans Canada (DFO) for her extensive research in this area. Mitacs funding supported ongoing collaboration with the Cape Breton Regional Municipality (CBRM) Water Utility around water quality. The research examines the natural filtration

capabilities of the yellow lampmussel residing in North Sydney's Pottle Lake, which supplies water to over 16,000 residents in the municipality's northside communities.

### Adding lives to years: Exploring avenues for engaging older adults of Victoria County

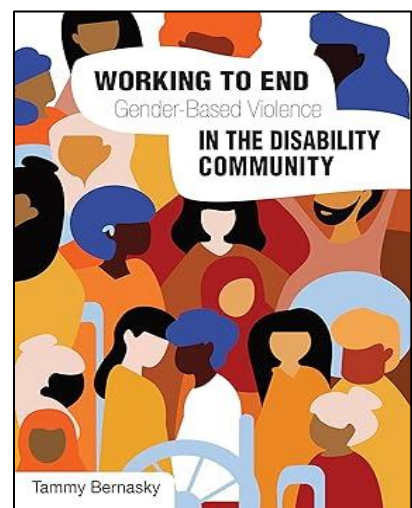
Dr. Bishakha Mazumdar, Assistant Professor of Organizational Management in CBU's School of Business, is aiming to inform community programs by conducting research among older adults residing in Cape Breton's Victoria County. Dr. Mazumdar was successful in gaining funding through a SSHRC Partnership Engage Grant to support this research. CBU's key strengths in research collaborations and community engagement are fundamental to the project. Dr. Mazumdar works with CBU colleagues, including Dr. Kevin McKague, Canada Research Chair in Social Enterprise and Inclusive Markets, and the Victoria County Home Support Services (VCHSS). Through this project, VCHSS is gaining a deeper understanding of the challenges and aspirations of older adults and explore opportunities to collaborate with other organizations in the community to support these needs.

### Building Research Infrastructure

CBU research collaborations are often the foundations for success at CBU. This includes a collaboration among faculty to advance CBU's lab capacity. Faculty from the departments of chemistry and biology received funding through the Canadian Foundation for Innovation, with additional supported from by Research Nova Scotia, to develop a Water Treatment and Environmental Remediation (WaTER) Laboratory. The WaTER program builds on CBU's strengths in environmental toxicology and remediation, sustainable energy and materials, health, and rural community engagement, including Indigenous community studies. The proposed WaTER Lab enhances the research capacity in environmental health sciences at Cape Breton University and beyond.

### Working to end Gender-based Violence in the Disability Community

CBU's Dr. Tammy Bernasky specializes in addressing gender-based violence in the disability community. Using an intersectional approach, her research is focused on understanding the impacts of oppression and developing pathways to empowerment. Among her recent accomplishments, Dr. Bernasky has written a book exploring gender-based violence and disability from the vantage point of resistance movements. The research and subsequent publication amplify the experiences of thirteen community organizers and self-advocates working to end gender-based violence. These stories, told from Australia, Bangladesh, Canada, Ghana, India, Kenya, United States, Nepal, and Yemen identify common challenges and transformative aspects of community organizing. This work focuses on globalizing with a difference, a key pillar of CBU's strategic plan.



## CBU Supports Water Quality Testing

Since 2016, the Cape Breton Regional Municipality (CBRM) water utility has collaborated with CBU on a range of initiatives. CBU's Dr. Ken Oakes, Associate Professor of Biology and ecotoxicology specialist, continued this partnership in 2022 with support from NSERC Alliance and Mitacs Accelerate. As is common in rural jurisdictions, non-urban residents in CBRM rely on privately owned and maintained dug or drilled wells. Few of these privately-owned wells are routinely assessed for chemical or microbial exceedances relative to water quality guidelines. Dr. Oakes, in partnership with colleagues at CBU and in the Verschuren Centre, engaged in research titled: *Homeowner water quality testing through use of miniaturized ISE and FET-based sensor arrays*. With an industry partnership, the research team is developing an at-home testing kit for well owners. The research team is also exploring the application of this technology in the aquaculture sector.

## CBU Research Collaboration: Songs and Stories of Migration and Encounter: Ukrainian Settler Communities, Interdisciplinary Perspectives, and Intercultural Connections Toward Reconciliation in Unama'ki

Dr. Marcia Ostashewski, Associate Professor of Ethnomusicology at CBU, has a history of building musical and intercultural collaborations to connect local and international communities. Supported by a SSHRC investment, Dr. Ostashewski, led the development of a community-engaged exhibit, contributed to a research portal [diversitycapebreton.ca](https://diversitycapebreton.ca). She initiated an Indigenous-led research-creation workshop involving elders and youth of Mi'kmaw and Ukrainian ancestry, and developed a virtual speakers' series as well as new digital learning resources, shared free online by Smithsonian Folkways.

## Internal Research Funding

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The Office of Research and Graduate Studies (ORGS), through the Research Assistance Committee of Senate (RAC), awards internal grants to support various forms of research and scholarly activity. These internal research grants are the Start-Up Research Grants (SURG) and the Research Innovation Scholarship Exploration (RISE) grants.

**Figure 2: Internal funding awards**

Internal Research Funding 2022-23	
RISE	SURG
\$216,116	\$141,815

## RISE Spotlights

In the spring of 2023, Cape Breton University supported 29 faculty with internal funding awarded through a competitive process for RISE grants. Adjudicated by the Research Assistance Committee of Senate, RISE grants provide up to \$8000 to support research activities.

RISE recipient Dr. Mohamad Musa, Assistant Professor of Social Work in the School of Education and Health, was recognized as a Distinguished RISE, for his project, *Mental Illness Perceptions among Middle Eastern Migrants in Atlantic Canada: The Search for A Quantitative Database* was awarded Distinguished Rise. As a new addition to CBU's research and teaching community, Dr. Musa is focused on engaging service users and providers to enhance the existing mental health systems in Atlantic Canada.

In the School of Nursing, Dr. Karen Kennedy was recognized for her project, *Synthesis of barriers and facilitators to sexual violence reporting at Canadian undergraduate universities: Recommendations from a scoping review*. Dr. Kennedy is a Registered Nurse with diverse expertise, most recently as a Sexual Assault Nurse Examiner. Dr Kennedy has earned a Doctorate of Education from Western University and is currently an Assistant Professor and Chair in the Nursing Department. Her research project provides a timely research pursuit that connects to the needs and experiences of post-secondary students at CBU and beyond.

## Start-Up Research Grant

Dr. Allison Jeffrey, Assistant Professor in CBU's Department of Experiential Studies in Community and Sport, works within a research domain that includes posthuman theoretical understandings of moving bodies and gendered dimensions of physical activity, sport and movement communities. With support from CBU's Start-Up funding, Dr. Jeffrey is furthering her study of physical activity, looking at the practice of yoga. Dr. Jeffrey is supporting student employment, and establishing a foundation for research success, thanks to the support of internal SURG funding.

## Supporting Student Research

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This fiscal year, CBU offered increased opportunities for student researchers. It's a reflection of the growth in faculty research, as well as continuation of CBU's internal student awards. A total of 368 students were engaged in academic research, a significant increase over the previous year. CBU continues to provide exceptional opportunities for undergraduate student research, with experiences that are often limited to graduate students at other post secondary institutions.

Almost \$800,000 of the total research funding was dedicated to the student research experience.



### CBU Sponsors Community-Student Research Connections Program

CBU has strengthened its support for the student research experience with the creation of a model for community engaged research. This program connects CBU student researchers with community groups and small businesses that have a research project or question. Eligible students are matched with community projects to provide research assistance (primarily remote, desk-top studies) and receive a stipend for their service. Community organizations are then equipped with the tools for data-driven planning and development, thanks to the work of the student researchers.

### Looking Ahead

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CBU's research portfolio has grown significantly since this reporting period. This includes increased capacity in the Centre of Excellence for Healthy Aging, as well as progress towards a new Medical School at CBU. The Office of Research and Graduate Studies is excited to support and celebrate the research initiatives that are certain to result from these successes.