

[UNB launches innovative program aimed at provincial health care reform](#)

Well before the COVID-19 pandemic, the University of New Brunswick was developing an ambitious plan to help address the most challenging and important issue facing New Brunswick and Canada – the delivery of effective, efficient and sustainable health care.

UNB's Integrated Health Initiative (IHI) is a program focused on health education and research, coupled with social innovation and greater collaboration, and its aim is to achieve systemic health care reform in New Brunswick and Canada.

This multi-faceted program was launched on UNB's Saint John campus in September with the introduction of a new [Bachelor of Health degree](#). With enrolment already exceeding targets, the Bachelor of Health is simply the first successful stage in a robust and meticulously considered program.

A complementary extracurricular certificate in health, as well as Master in Business Administration in Health Management and a Master of Health in Public Policy will follow. Increased enrolment when all the programs are established is expected to reach 500 over the next few years.

Each of these programs will be characterized by a unique interdisciplinary approach, organized and supported by UNB Saint John's three faculties, bringing together biomedical sciences, social sciences and business education for undergraduate and graduate students; a focus on reforming health care for the people of New Brunswick and Canada; and meaningful collaboration with partners, including Dalhousie Medicine New Brunswick, Horizon Health Network, the Saint John Regional Hospital and New Brunswick Community College.



Pictured: HSIC rendering

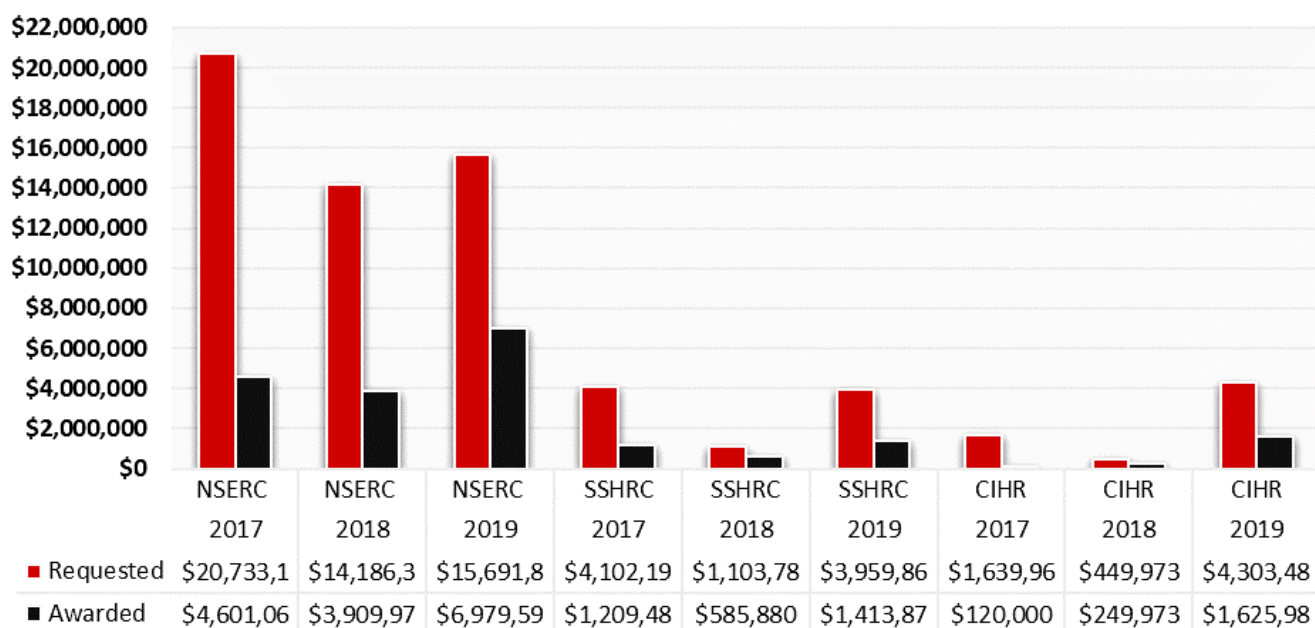
This edition of [Research Matters](#) highlights Tri-Council results and innovation activities from Fiscal Year 2019–20 as found in the table of contents below.

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Tri-Council – F2019-20 Results

Submissions	Program	Submitted	Requested	Successful	Awarded	Success Rate	Funding Rate
NSERC	Alliance	2	\$161,382.00	1	\$20,382.00	50.00%	12.63%
	CRD	3	\$3,179,214.00	3	\$3,179,214.00	100.00%	100.00%
	RTI	10	\$1,157,354.00	0	\$0.00	0.00%	0.00%
	Discovery	33	\$10,826,422.00	23	\$3,665,000.00	69.70%	33.85%
	Engage & Engage Plus	3	\$74,655.00	1	\$25,000.00	33.33%	33.49%
	Other	6	\$292,800.00	1	\$90,000.00	16.67%	30.74%
	Total NSERC	57	\$15,691,827.00	29	\$6,979,596.00	50.88%	44.48%
SSHRC	Insight	15	\$2,403,010.00	5	\$571,314.00	33.33%	23.77%
	Other	26	\$1,556,851.00	12	\$842,559.00	46.15%	54.12%
	Total SSHRC	41	\$3,959,861.00	17	\$1,413,873.00	41.46%	35.71%
CIHR	Project	4	\$2,055,000.00	1	\$466,650.00	25.00%	22.71%
	Other	9	\$2,248,489.00	3	\$1,159,334.00	33.33%	51.56%
	Total CIHR	13	\$4,303,489.00	4	\$1,625,984.00	30.77%	37.78%

Tri-Council Results



Canadian Institutes of Health Research (CIHR)
Natural Sciences and Engineering Research Council of Canada (NSERC)
Social Sciences and Humanities Research Council of Canada (SSHRC)

For more information on these funding programs please visit [Tri-Council funding](#).

Institutional Funding

Canada Research Chairs

UNB received \$1.1 million for our seven active Canada Research Chairs (CRCs) in 2019-20. UNB did not submit any CRC nominations or renewals during this reporting period. Dr. Veronica Whitford, CRC in Cognitive Neuroscience of Bilingual Reading Across the Lifespan, took up her chair in July 2019 after a successful nomination in the previous year.

UNB met its CRC equity and diversity targets by the deadline of December 2019. The CRC program is currently in the process of determining increased targets for a 2029 deadline.

UNB's CRC contingent as of April 30, 2020:

	Name	Department/Faculty	CRC in...	Tier
1	Bruce Balcom	Physics	Materials Science Magnetic Resonance Imaging	1
2	Stijn De Baerdemacker	Chemistry	Theoretical Chemistry	2
3	Ali Ghorbani	Computer Science	Cybersecurity	1
4	Elizabeth Mancke	History	Atlantic Canada Studies	1
5	Yonghao Ni	Chemical Engineering	Pulp and Paper Science and Engineering	1
6	Scott Pavey	Biology	Aquatic Molecular Ecology and Ecological Genomics	2
7	Veronica Whitford	Psychology (F)	Cognitive Neuroscience of Bilingual Reading Across the Lifespan	2

Intellectual Property Management, Technology and Knowledge Transfer

The Industry-Government Services (IGS) division of the Office of Research Services (ORS) connects business to researchers and guides research to market. In the fiscal year 2019-20, IGS:

- Secured 5 Springboard Innovation Mobilization funding projects (Industry Engagement; Patent);
- Managed 7 new invention disclosures;
- Entered into 7 technology transfer agreements and options with industry;
- Filed 21 patent applications;
- Had 10 previous patent applications issued as registered patents;
- Received licensing revenues of \$141,672.38;
- Hosted or assisted with 9 industry workshops.

Technology and Knowledge Transfer (Last 5 Fiscal Years)

Fiscal year (May 1 – April 30)	2015-16	2016-17	2017-18	2018-19	2019-20
Disclosures	20	21	8	11	7
Patent applications filed	7	12	11	13	21
Patents Issued	16	10	7	6	10
License & options agreements	12	15	14	7	7
License revenue	\$91,410	\$94,257	\$193,384	\$779,973	\$141,672
Spin-offs created ⁽¹⁾	0	0	0	2	1

Note #1: Spin-offs represent companies created (i) through licensing of IP assigned to UNB by inventors, or (ii) to provide services originally provided by an existing department or Faculty at UNB, and do not represent all UNB-related start-up companies. IGS assisted a number of UNB-related spin-offs through the provision of advice and template agreements during the period.

Since the establishment of the Intellectual Property Management Program within the Office of Research Services in late 1999, UNB has been active in transferring technologies into the marketplace, with a strong focus on industry collaboration. In the period from May 1, 2000 to April 30, 2020, IGS has:

- Managed 323 invention disclosures;
- Filed patent applications for 116 separate technologies (many of these technologies involved filing one technology/patent in multiple jurisdictions);
- Had 109 patents issued;
- Filed 19 Section 9 trade-marks for the University (note: other departments at UNB also filed section 9 trade-marks);
- Completed 179 technology transfer deals;
- Secured licensing revenues of over \$5 million;
- Assisted in the creation of 23 UNB spin-off companies.

Industrial Research Assistantship Program (National Research Council)

Since 2006, the National Research Council (NRC), through UNB's Office of Research Services (ORS), has been providing short-term scientific or technical assistance to Canadian, for-profit, small-to-medium enterprises (SMEs) under the NRC-IRAP Contribution to Organization (CtO) Program.

The objective of the CtO Program is to support the innovative needs of Canadian SMEs through the provision of short-term technical assistance from faculty, staff and students at UNB. The CtO Program helps build and integrate innovation capacity in Canada and encourages investment in R&D activities that have clear commercialization goals.

UNB works with individual companies to provide applied research services on a project within, but not limited to, the following areas:

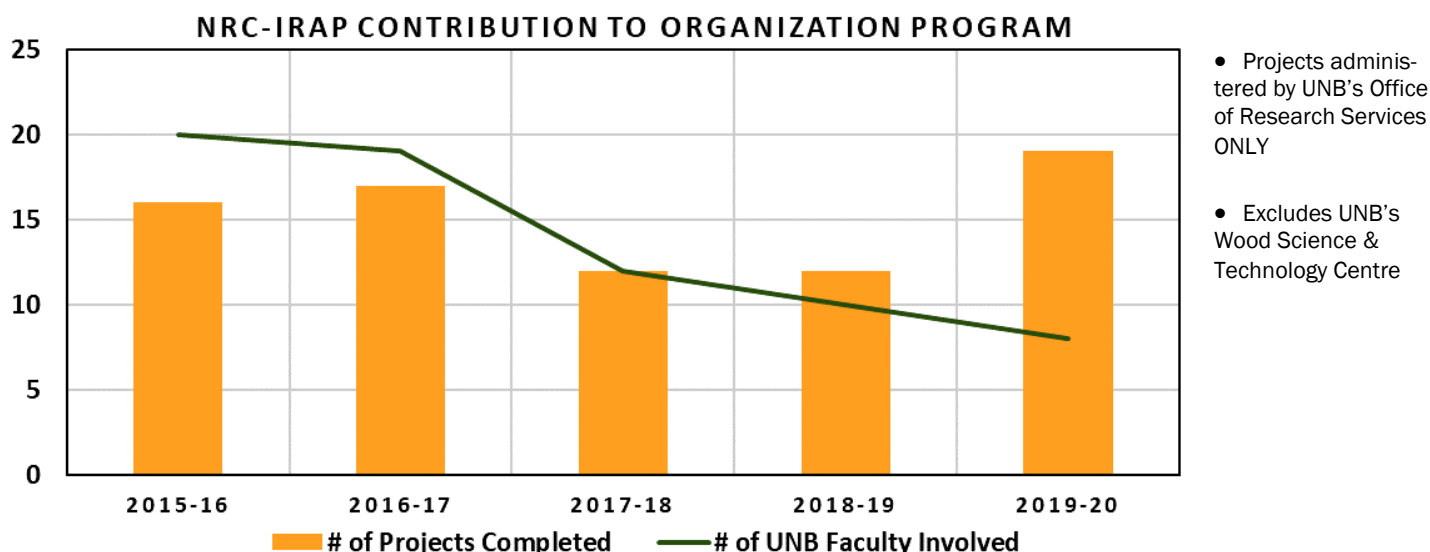
- Scientific or technical business advice;
- New product/process development or improvement;
- On-site troubleshooting of issues (in manufacturing, etc.);
- Prototype/proof of concept evaluation;
- Reliability/quality improvement;
- Product testing;
- Technology and/or literature searches/reviews;
- Technical training of company staff;
- Seminars/conferences on specific technical issues of interest to industry;
- Ad-hoc advice.

Each project is assessed by NRC-IRAP for its plan and challenges, the researcher's capacity to achieve success and the potential impact the project will have on the business, and Canada. There must be a viable business opportunity and the company must plan to commercialize the results.

For the 2019-2020 fiscal year, UNB administered 19 NRC-IRAP CtO projects involving 12 different UNB faculty, staff or students. The projects were worth a total of \$82,077.00.

- UNB's Office of Research Services administered 10 consultation projects, worth \$37,945.
- UNB's Wood Science & Technology Centre administered 9 consultation projects, worth \$44,131.15.

Since its inception in 2006, a total of 237 projects have been completed under this program through the Office of Research Services.





Mitacs Academic Partner Report – F2019-20 Results

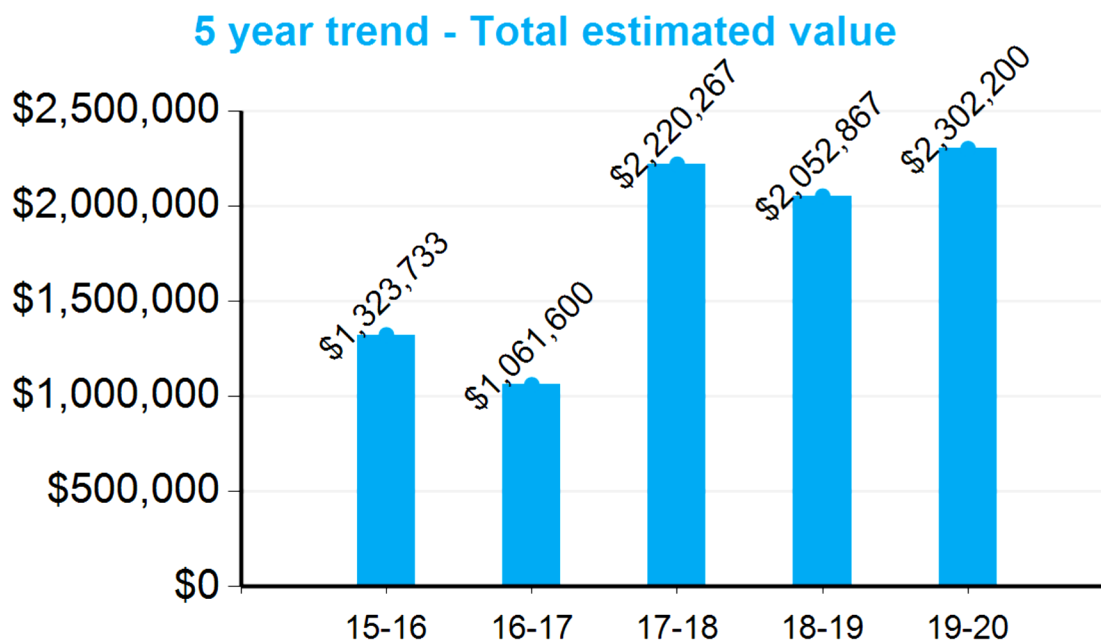
As a [Mitacs](#) full partner, the **University of New Brunswick** accessed the following programs in 2019-20:

- **Accelerate:** 123 Accelerate internship units submitted, valued at \$2,005,000
- **Accelerate International:** no internship units submitted, \$0
- **Elevate:** No fellowships awarded
- **Globalink Research Internships (GRI):** 20 international interns hosted at UNB in the summer of 2019, valued at \$240,000
- **Globalink Graduate Fellowships:** no fellowships awarded, \$0
- **Globalink Research Awards:** 5 projects awarded, valued at \$30,000
- **Training:** 28 participants attended training workshops, valued at \$27,200

The total value to the University of New Brunswick in 2019-20 was **\$2,302,200**

During the 2019-20 fiscal year **\$1,674,267** in cash was disbursed to the University of New Brunswick. This total includes program funding that had been awarded (but not disbursed) in previous fiscal years, as well as funding installments that are disbursed over multiple years.

The **total estimated value** to the University of New Brunswick in the last ten years was **\$12,302,133** (i.e. Training, GRI). A total of **\$6,535,426** in cash has been sent to the University of New Brunswick over the past ten years.

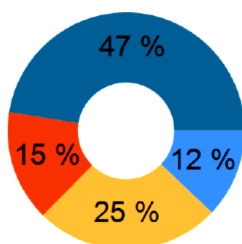




Mitacs Accelerate Statistics – 2019-2020

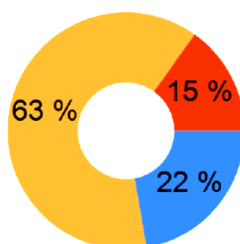
Mitacs tracks a number of details relating to Accelerate internships. The following charts summarize data pertaining to the University of New Brunswick's past Accelerate projects submitted in 2019–2020.

Intern degree



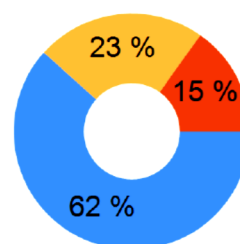
Doctorate
Masters
Other/Undisclosed
Post-Doctoral

Intern gender



Female
Male
Undisclosed

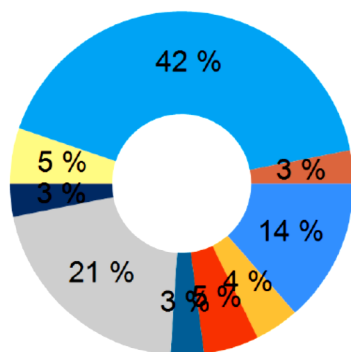
Intern citizenship



Canadian Citizen
Foreign
Undisclosed

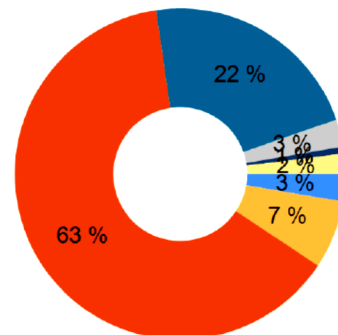
* Industry sector as defined by NAICS code

Industry sectors*



Agriculture, forestry, fishing and hunting
Construction
Health care and social assistance
Information and cultural industries
Manufacturing
Other services (except public administration)
Others
Professional, scientific and technical services
Utilities

Academic disciplines



University of New Brunswick

Computer Science
Earth Sciences
Engineering
Life Sciences
Mathematical Sciences
Physical Sciences
Social Sciences/Arts Humanities

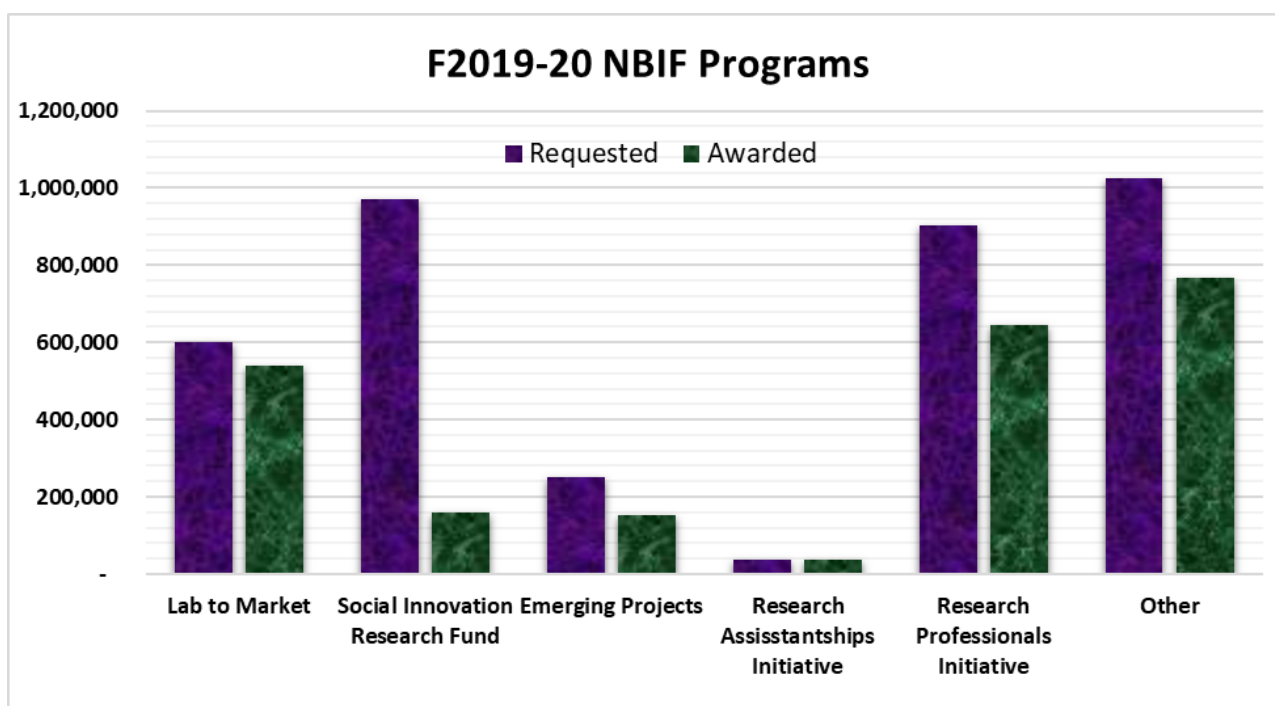


New Brunswick Innovation Foundation (NBIF) – F2019-20 Results

The Research Assistantships Initiative (RAI) which was a joint initiative between NBIF and the New Brunswick Department of Post-Secondary Education, Training and Labor (PETL) was suspended in 2020 with two awards given to NBIF Chairholders.

NBIF added two new programs in 2020: Lab to Market and Social Innovation Research Fund as depicted in the below chart.

F2019-20 Programs	Submitted	Requested	Successful	Awarded	Success Rate	Funding Rate
Lab to Market	6	601,100	6	540,640	100.00%	89.94%
Social Innovation Research Fund	27	970,723	6	159,612	22.22%	16.44%
Emerging Projects	11	250,950	7	152,700	63.64%	60.85%
Research Assistantships Initiative	2	36,000	2	36,000	100.00%	100.00%
Research Professionals Initiative	10	903,300	7	645,500	70.00%	71.46%
Other	13	1,024,174	8	766,600	61.54%	74.85%
Total	69	3,786,247	36	2,301,052	52.17%	60.77%





NB Health Research Foundation (NBHRF) - Financial Contributions to UNB

The [New Brunswick Health Research Foundation](#) (NBHRF) is the primary funder for health research in the province of New Brunswick. The table below shows the [funding opportunities](#) that NBHRF provided to UNB as a post-secondary institution in the Province of New Brunswick during fiscal years 2018-2019 and 2019-2020.

Overall, NBHRF and partners funded **\$2,426,977 in 2018-19** to UNB health researchers and their undergraduate and graduate students. Those funds also supported projects and created jobs such as, but not limited to, technicians, research assistants and/or research associates.

The value of these grants and awards includes the matching and leveraging portion of funds obtained by other parties such as private partners, federal granting bodies, national agencies, and health charities.

Program	2018-19	2019-20	# of Investigators	# of Undergrads	# of Graduates
Grants					
Establishment	\$ 60,000	\$ 120,000	2	n/a	n/a
Bridge	\$ 105,000	\$ 97,287	3	n/a	n/a
Strategic Initiative	\$ 101,000	\$ 66,972	4	n/a	n/a
Workshop	\$ 18,789	\$ 10,000	3	n/a	n/a
Travel awards	\$ 7,491	\$ 5,979	6	n/a	5
CIHR-SPOR-MSSU	\$ 332,777	\$ 680,836	1	n/a	n/a
CIHR-SPOR-PIHCI	\$ 110,000	\$ 170,000	1	n/a	n/a
CIHR-SPOR-NCD-CHILD	\$ 50,000	\$ 50,000	1	n/a	n/a
CFI	\$ 50,000	\$ 74,785	2	n/a	n/a
CABHI Grants	\$ 123,182	\$ 92,147	3	n/a	n/a
Salary Awards					
Summer Studentships	\$ 54,384	\$ 65,725	11	11	n/a
MSc Studentships	\$ 24,000	\$ 17,000	1	n/a	1
PhD Studentships	\$ 10,230	\$ 22,730	3	n/a	3
Postdoctoral Fellowships	\$ 102,500	\$ 40,000	1	n/a	1
MSSU Awards	\$ 214,334	\$ 49,000	2	n/a	2
Chairs	\$ 524,500	\$ 275,850	4	n/a	n/a
CFN Awards	\$ 114,200	\$ 57,955	7	2	n/a
BHCRI Awards	\$ 28,685	\$ 17,924	1	n/a	n/a
CA\$ TOTAL	\$ 2,426,977	\$ 1,910,740	56	11	12

Research Outputs

The Research Output Indicators measures each institution's success in publishing in the peer reviewed academic literature. We are reporting comparative rankings in the total number of publications produced by UNB based on ReSearch Infosource Inc's statistics. The ranking position is based on all universities assessed, however, we are only reporting the rankings for our selected peer group of comprehensive universities. ReSearch Infosource Inc's statistics are based on publication data obtained from Observatoire des sciences des technologies' (OST) Canadian bibliometric which contains data from SCI-Expanded, SSCI, and AHCI databases of Thompson Reuters; and faculty data obtained from Statistics Canada and the ReSearch Infosource University R&D Database.

1. "Total Number of Publications" includes articles, notes, and reviews published by researchers affiliated with Canadian universities and research hospitals in 12,571 peer-reviewed scientific international journals covering natural sciences, health sciences, and social sciences and humanities.
2. "Publication Intensity" is defined as the total number of publications per full-time faculty (full, associate, and assistant faculty positions are only included). It is estimated that there is, on average, a minimum 2-year publication lag time.
3. "Publication Impact" points are based on the Average Relative Impact Factor (ARIF) which was developed and provided by OST. It is based on a measure of perceived impact of research through a calculation of citations received by journals. The impact factor does not measure the specific number of citations per article (i.e. direct impact), but rather, is a measure of the probability of being cited (i.e. perceived impact). OST developed the ARIF to compare the impact factor from several specialities as an article's probability of being cited is not the same for all fields. The ARIF does not include journals on the humanities.

Total number of publications: In 2019 UNB ranked 26 out of 48 universities;

Publication intensity: In 2019 UNB ranked 21 out of 48 universities;

Publication impact: In 2019 UNB ranked 42 out of 48 universities.

Research Output Indicators											
YEAR	Waterloo	Guelph	Victoria	Simon F	Carleton	Memorial	Manitoba	UNB	Concordia	Windsor	Regina
Total Number of Publications- RANK											
2015	10	16	18	17	21	23	12	26	22	28	29
2016	10	16	18	17	20	23	12	26	22	27	28
2017	10	16	19	17	20	23	12	26	22	27	29
2018	10	17	18	16	20	23	12	26	22	27	28
2019	10	17	18	16	20	23	12	26	22	27	28
Publication Intensity - RANK											
2015	6	13	14	15	21	32	18	23	37	26	24
2016	5	11	14	15	19	33	17	21	23	24	20
2017	5	12	16	14	19	28	17	22	20	30	25
2018	7	12	13	14	19	24	17	21	20	26	23
2019	7	12	13	14	19	24	17	21	20	26	23
Publication Impact - RANK											
2015	19	25	12	10	30	31	23	37	35	27	33
2016	10	25	9	11	31	34	19	46	28	29	20
2017	18	21	15	9	28	19	20	42	32	29	26
2018	12	23	10	5	28	33	17	42	25	29	35
2019	12	23	10	5	28	33	17	42	25	29	35