

### Message from the Vice-President (Research)

Looking back on our 2018-2019 fiscal year, we have a lot to be proud of. We saw our research revenue rebound, with \$51.7 million recorded. This not only represents an increase of 20.5% over 2017-2018, but also meets and exceeds our 2016-2017 revenues. We also saw year-over-year revenue increases in most of our faculties and institutes.

At Tri-Council competitions, we saw nearly half of our researchers' applications receive funding. SSHRC applications, in particular, saw increased success in proportion of successful applications, number of funded projects, and total funding amount.

The year saw many successes: We established the Off-site Construction Research Centre, with a corresponding research chair, thanks to an investment from OSCO Construction Group. Dr. Yang Qu joined us as UNB's first—in fact, Canada's first—Cannabis Health Research Chair. We created new partnerships with the Government of New Brunswick and ARC Nuclear Canada, as part of the Small Modular Reactor Research and Development Cluster. Dr. Susan O'Donnell established the Rural Action and Voices for the Environment research project, to bring groups together to protect and strengthen rural communities and the environment.

These and the many other successes tell me that we have a very solid foundation on which to build our future. Our new strategic plan sets a bold and positive vision for our institution, one with research growth as a major pillar. Our goals are an ambitious call to action, but they are also a recognition of the incredible talent and potential, that we have at UNB.

To support and develop that capacity, and to realize our full potential as a research institution, we'll need to look at new ways of enabling and empowering our researchers. I want to work with you to achieve these goals. Fortunately, UNB is home to many smart and creative people; this year, I'll be looking to you, our research community, to share your insights on how we can achieve those goals together.

I look forward to working with you to ensure that this next year brings even more success stories to celebrate.

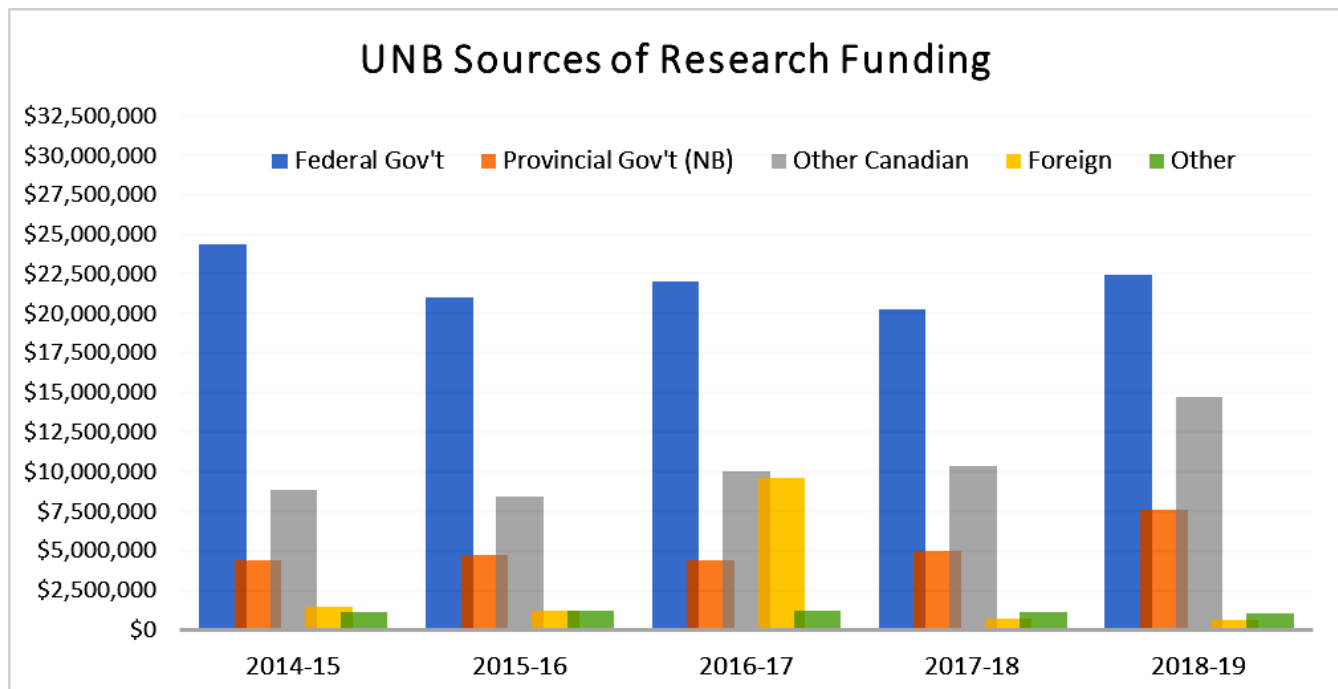
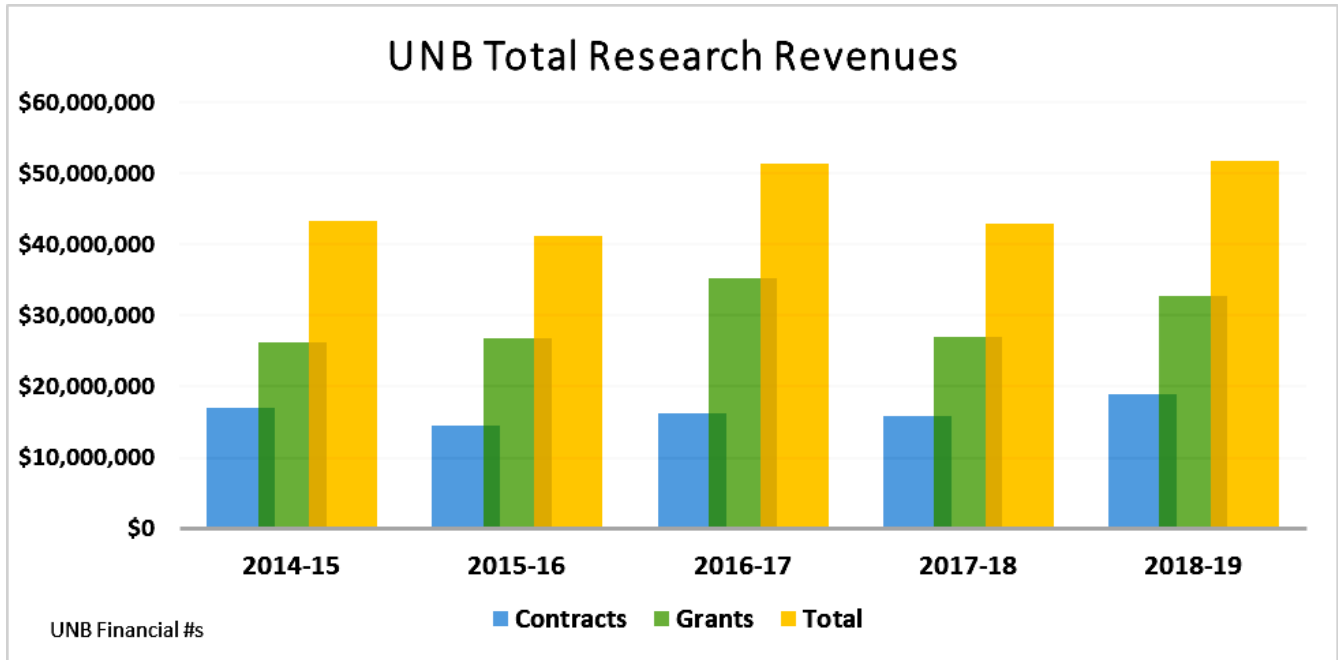


David MaGee,  
Vice-President (Research)

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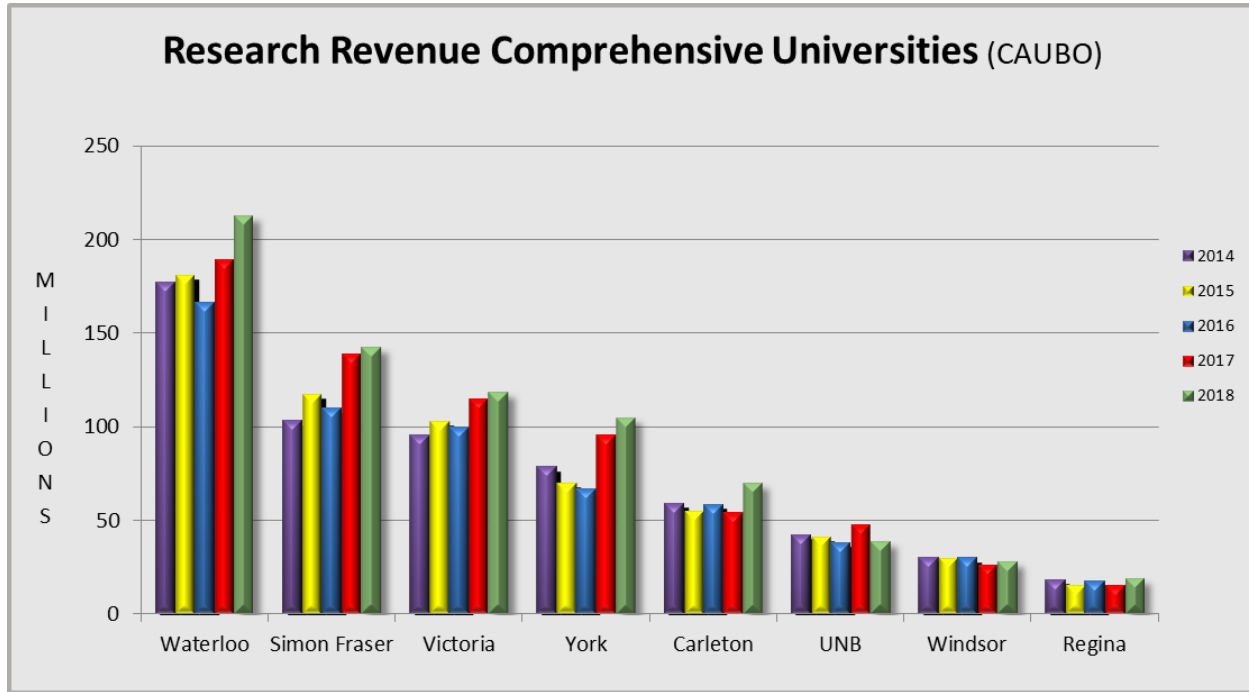
## Research Revenue

Our overall revenues have remained steady over the past 5 years, excluding 2016-17 fiscal year where we saw a large increase due to one-time funds from Lockheed Martin for both Cyber Security and Additive Manufacturing research. The 2018-19 fiscal year saw a increase in our total research revenues of 20% from last year.

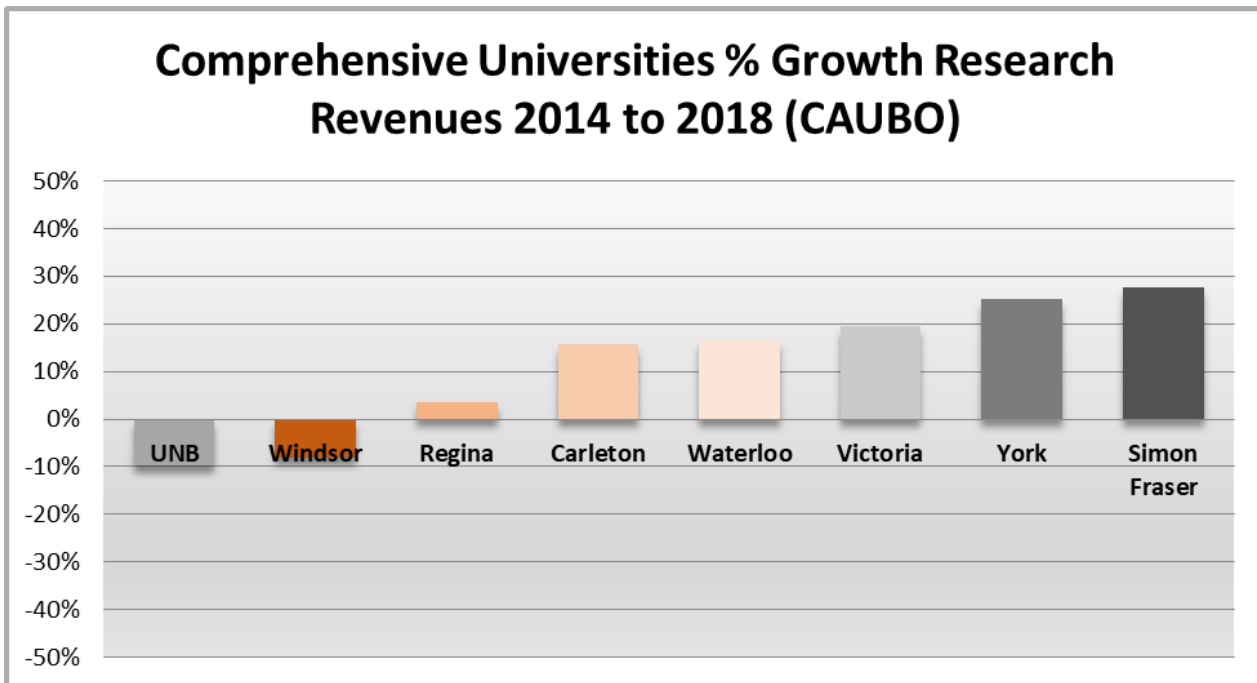


**Research Revenue (continued)**

The Canadian Association of University Business Officers (CAUBO) compiles summaries of research-related revenues based on mutually agreed upon definitions. It is this number that is used for inter-institutional comparisons. In the fiscal year 2018, UNB's total sponsored research revenues as per CAUBO rules was \$38.7M. This was down 19% from the final CAUBO number for the previous year. The inter-institutional comparative revenues graphed below are one year in arrears due to reporting and publication delays.



We have routinely reported our percentage growth in CAUBO research revenues over a rolling five year period in comparison to our peer group of universities, the chart below show's how we have done.



**Research Revenue (continued)**
**Research Revenue per Generating Academic Units & Research Institutes**

The following table attributes research revenues by generating academic unit during the last fiscal year. Grants, contracts and other column values are generated by audited CAUBO numbers. Funding for research scholarships such as Canadian Heritage, Canada Council, and The NB Arts Board are reported in the Additional Research Funding column, as submitted by Chairs and Deans of the departments and Faculties. Note that some research revenues are generated by the university, but are not reported on this table (e.g., the Research Support Fund program).

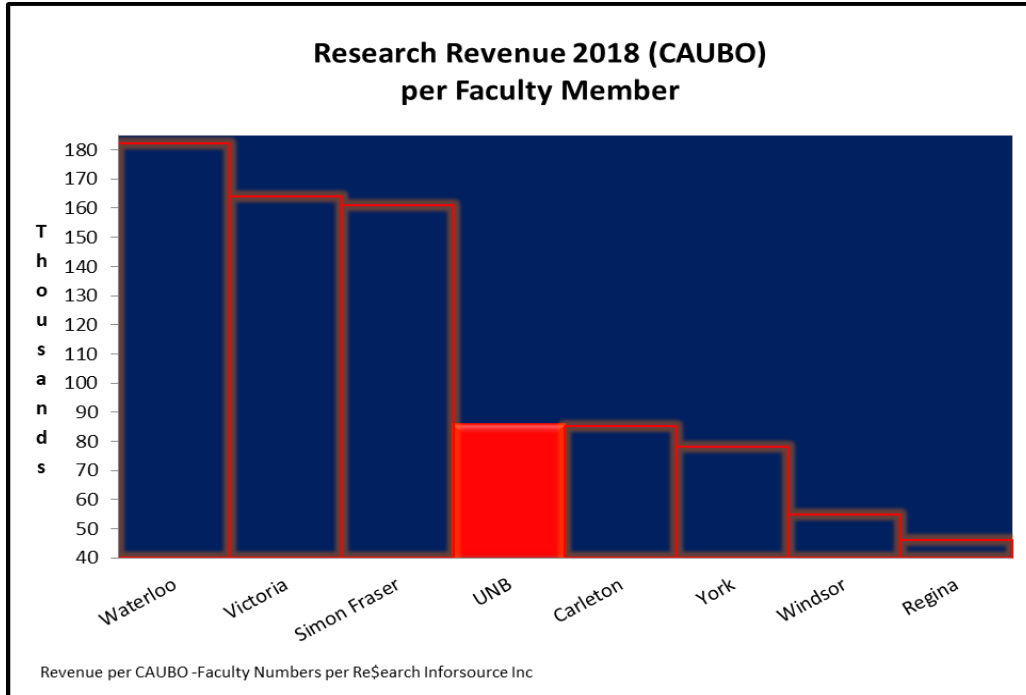
<b>Research Revenues per Generating Academic Units &amp; Research Institutes</b>					
<b>UNIT</b>	<b>Grants (CAUBO)</b>	<b>Contracts (CAUBO)</b>	<b>Other (CAUBO)</b>	<b>Total (CAUBO)</b>	<b>Additional Research Funding</b>
<b>ARTS (F)</b>	<b>3,276,125</b>	<b>89,974</b>	<b>196,610</b>	<b>3,562,708</b>	<b>358,778</b>
Arts	249,950			249,950	600
Anthropology	191,481		61,365	252,846	
Classics & Ancient History				0	
Culture & Media Studies				0	45,900
Economics	1,598,470	14,889		1,613,359	
English	64,774		17,500	82,274	229,040
French	74,647			74,647	
History	310,566		81,005	391,571	83,238
Political Science	123,396		5,000	128,396	
Philosophy			16,500	16,500	
Psychology	195,471		-7,752	187,719	
Sociology	467,369	75,085	22,992	565,445	
<b>MANAGEMENT (F)</b>	<b>84,159</b>		<b>21,250</b>	<b>105,409</b>	<b>9,300</b>
<b>COMPUTER SCIENCE (F)</b>	<b>707,461</b>	<b>575,519</b>	<b>-597</b>	<b>1,282,383</b>	
<b>EDUCATION (F)</b>	<b>195,112</b>		<b>106,909</b>	<b>302,021</b>	
<b>ENGINEERING (F)</b>	<b>4,884,095</b>	<b>4,302,470</b>	<b>466,327</b>	<b>9,652,891</b>	
Engineering				0	
Chemical Engineering	970,800	283,584	160,583	1,414,968	
Civil Engineering	319,633	336,421	34,640	690,694	
Electrical & Computer Eng.	1,143,438	1,002,818		2,146,257	
Geodesy & Geomatics	404,609	419,320		823,929	
Mechanical Engineering	1,459,452	2,185,739	71,648	3,716,839	
J Herbert Smith ACOA Chair	586,163	74,587	199,455	860,205	
<b>FORESTRY (F)</b>	<b>1,517,363</b>	<b>1,728,259</b>	<b>-5,075</b>	<b>3,240,546</b>	
<b>KINESIOLOGY (F)</b>	<b>669,122</b>	<b>30,000</b>	<b>28,010</b>	<b>727,131</b>	
<b>LAW (F)</b>	<b>10,364</b>			<b>10,364</b>	
<b>NURSING (F)</b>	<b>622,916</b>	<b>220,609</b>	<b>28,425</b>	<b>871,950</b>	<b>5,000</b>

**Research Revenues per Generating Academic Units & Research Institutes (continued)**

<b>Research Revenues per Generating Academic Units &amp; Research Institutes</b>					
<b>UNIT</b>	<b>Grants (CAUBO)</b>	<b>Contracts (CAUBO)</b>	<b>Other (CAUBO)</b>	<b>Total (CAUBO)</b>	<b>Additional Research Funding</b>
<b>SCIENCE (F)</b>	<b>4,554,873</b>	<b>2,030,998</b>	<b>108,596</b>	<b>6,694,466</b>	
Biology	1,288,722	407,002	14,300	1,710,024	
Chemistry	1,004,094	77,364	40,036	1,121,494	
Earth Sciences	876,836	223,542	43,949	1,144,327	
Math & Stats	416,850		10,311	427,161	
Physics	968,371	1,323,089		2,291,460	
<b>SCHOOL OF GRAD STUDIES</b>	<b>156,581</b>		<b>1,402,029</b>	<b>1,558,611</b>	
<b>INSTITUTE OF BIOMEDICAL ENGINEERING (IBME)</b>	<b>2,544,045</b>	<b>929,560</b>	<b>1,000</b>	<b>3,474,606</b>	
<b>CANADIAN INSTITUTE CYBERSECURITY</b>	<b>1,042,733</b>	<b>1,058,886</b>		<b>2,101,619</b>	
<b>ATLANTIC INSTITUTE FOR POLICY RESEARCH (Formerly CRISP)</b>		<b>8,833</b>	<b>2,173</b>	<b>11,006</b>	
<b>CDN. RIVERS INSTITUTE (CRI) (F &amp; SJ)</b>	<b>995,507</b>	<b>779,509</b>		<b>1,775,016</b>	
<b>NB INSTITUTE RESEARCH DATA</b>	<b>602,483</b>	<b>545,276</b>		<b>1,147,759</b>	
<b>CNER INSTITUTE</b>	<b>2,091,800</b>	<b>445,729</b>		<b>2,537,529</b>	
<b>ARTS (SJ)</b>	<b>35,458</b>	<b>158,243</b>	<b>46,599</b>	<b>240,300</b>	
History & Politics	23,458		46,599	70,057	
Humanities & Languages				0	
	12,000			12,000	
Social Science	0	0		0	
Criminal Justice Studies		158,243		158,243	
<b>BUSINESS (SJ)</b>	<b>30,000</b>		<b>-2,387</b>	<b>27,613</b>	
<b>SCIENCE, APPLIED SCIENCE &amp; ENGINEERING (SJ)</b>	<b>1,888,429</b>	<b>466,037</b>	<b>302,618</b>	<b>2,657,083</b>	
Biological Sciences	1,108,056	240,065	10,000	1,358,121	
Computer Science	24,000	-163		23,837	
Mathematics and Statistics	30,000			30,000	
Nursing & Health Sciences	605,281		292,618	897,899	
Science & Engineering	193,092	226,135		419,227	
Physical Sciences	-72,000			-72,000	
<b>DAL MEDICAL ED PROGRAM</b>	<b>216,760</b>			<b>216,760</b>	
<b>URBAN &amp; COMMUNITY STUDIES INSTITUTE</b>				<b>0</b>	

**Research Revenue (continued)**

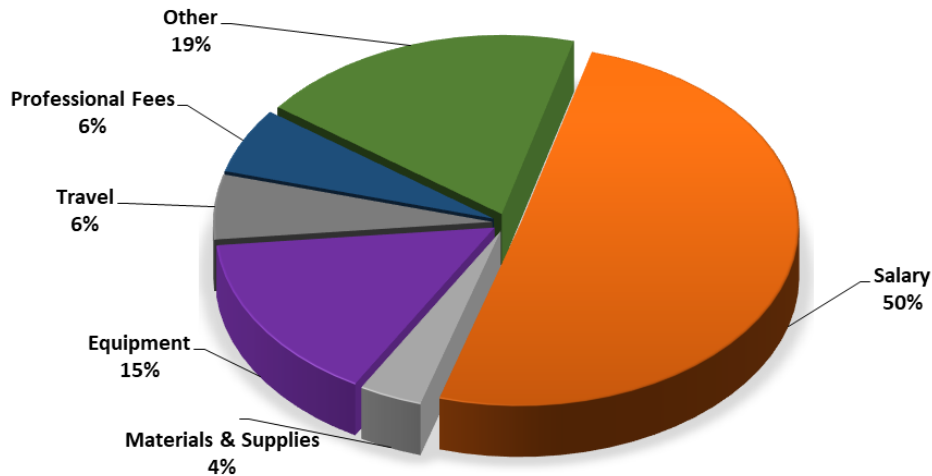
A metric that is commonly cited when comparing the research intensity at universities is the research revenue generated per faculty member. In order to make such a comparison credible, independent sources are required for the two metrics. For our purposes, we use Re\$earch Info Source Inc. and CAUBO to generate the table shown below.



**Research Expenditures**

The majority of the research funding received by UNB goes back into the New Brunswick economy through salaries. In 2018-19, \$23.6 million was spent on student and non-student salaries. Equipment, materials and supplies consumed \$9.8 million and travel \$1.7 million.

**Research Expenditures UNB 2018-2019**

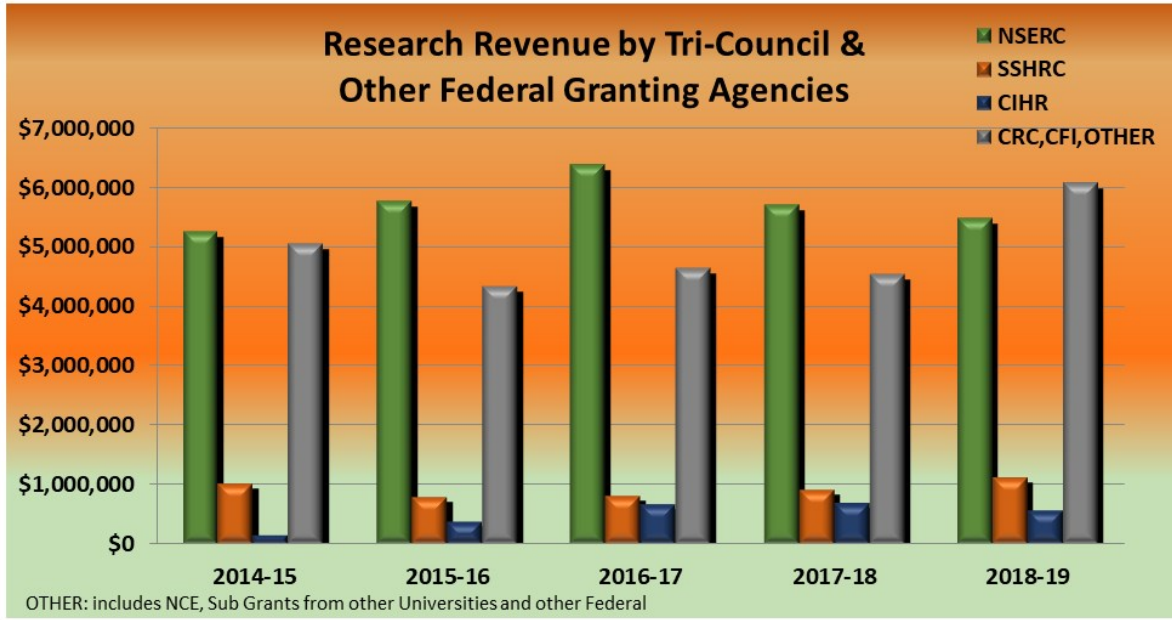


\*Note: Preliminary Numbers from Datatel System

NOTE: The bulk of all research revenues eventually flow back out as expenses. Due to the timing of different accounting tasks, however, total research expenditures will not equal total research revenues for the fiscal year.

## Tri-Council Funding

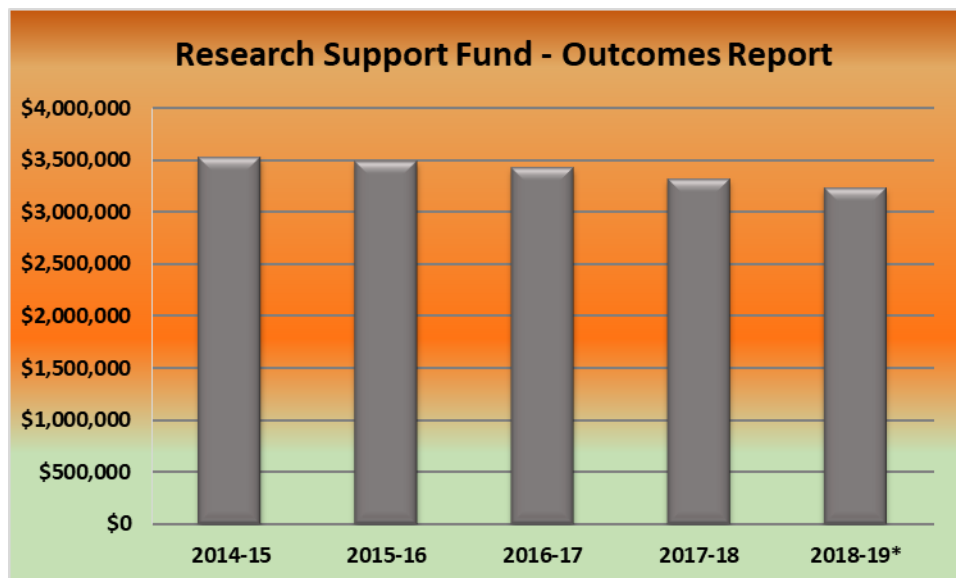
UNB's Tri-Council (NSERC, SSHRC, CIHR) grant revenues in fiscal year 2018-19 decreased by 2.2% overall to \$7.14M from the \$7.3M level of 2017-18.



As indicated, grants from Tri-Council are a very important component of UNB's research activities. The details of our successes or lack thereof are being continuously scrutinized. To that end, details of our 2018/19 submissions to, and awards from NSERC, SSHRC & CIHR are depicted on the above table (totals awarded will differ from the research revenue recognized above due to timing of revenue recognition).

## Research Support Fund

The Research Support Fund program provides funding for research facilities, resources, management and administration, regulatory requirements, accreditation and intellectual property management. The amount universities receive from this program is contingent on their level of Tri-Council funding based on a three-year rolling average. The university's allocation for 2017-18 was \$3,328,336, and the allocation for the 2018-19 fiscal year was \$3,232,853.



## Tri-Council Success

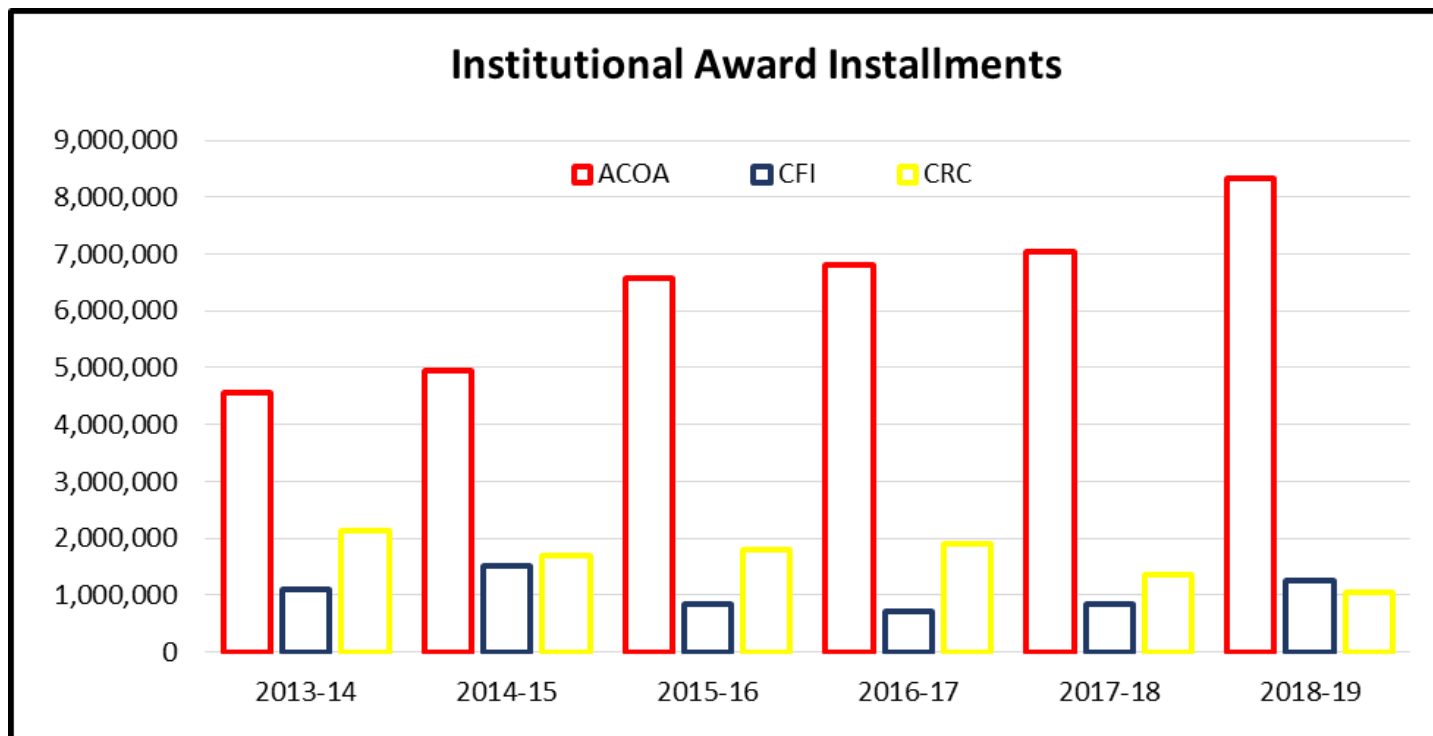
UNB's awarded Tri-Council success results are based on the 2018 calendar year.

2018 Results							
Submissions	Program	Submitted	Requested	Successful	Awarded	Success Rate	Funding Rate
NSERC	CRD	4	768,800	4	768,800	100.00%	100.00%
	Strategic Project (LOI)	-	-	-	-	-	-
	RTI	13	1,148,858	1	48,541	7.69%	4.23%
	Discovery	34	10,408,956	20	2,683,430	58.82%	25.78%
	Engage & Engage Plus	17	347,216	14	297,216	82.35%	85.60%
	Other	18	1,512,535	5	111,985	27.78%	7.40%
	<b>Total NSERC</b>		<b>86</b>	<b>14,186,365</b>	<b>44</b>	<b>3,909,972</b>	<b>51.16%</b>
SSHRC	Insight	8	943,289	5	299,053	62.50%	31.70%
	Other	26	1,103,783	12	585,880	46.15%	53.08%
	<b>Total SSHRC</b>	<b>34</b>	<b>2,047,072</b>	<b>17</b>	<b>884,933</b>	<b>50.00%</b>	<b>43.23%</b>
CIHR	Foundation Scheme		Foundation Scheme Suspended				
	Project (frmly OOG)	7	3,675,000	0	0	0.00%	0.00%
	Other	7	449,973	3	249,973	42.86%	55.55%
	<b>Total CIHR</b>	<b>14</b>	<b>4,124,973</b>	<b>3</b>	<b>249,973</b>	<b>21.43%</b>	<b>6.06%</b>

2017 Results							
Submissions	Program	Submitted	Requested	Successful	Awarded	Success Rate	Funding Rate
NSERC	CRD	3	879,875	3	879,875	100.00%	100.00%
	Strategic Project (LOI)	1	0	0	0	0.00%	0.00%
	RTI	11	984,384	1	149,300	0.00%	0.00%
	Discovery	46	14,014,905	25	3,079,000	54.35%	21.97%
	Engage & Engage Plus	15	343,719	13	297,219	86.67%	86.47%
	Other	11	4,510,287	8	195,669	72.73%	4.34%
	<b>Total NSERC</b>		<b>87</b>	<b>20,733,170</b>	<b>50</b>	<b>4,601,063</b>	<b>57.47%</b>
SSHRC	Insight	19	2,509,611	8	1,181,346	42.11%	47.07%
	Other	30	1,592,583	3	416,313	4.80%	1.10%
	<b>Total SSHRC</b>	<b>49</b>	<b>4,102,194</b>	<b>11</b>	<b>1,597,659</b>	<b>22.45%</b>	<b>38.95%</b>
CIHR	Foundation Scheme		Foundation Scheme Suspended				
	Project (frmly OOG)	4	770,000	0	0	0.00%	0.00%
	Other	5	869,961	2	120,000	40.00%	13.79%
	<b>Total CIHR</b>	<b>9</b>	<b>1,639,961</b>	<b>2</b>	<b>120,000</b>	<b>22.22%</b>	<b>7.32%</b>



## Institutional Funding



### Atlantic Canada Innovation Fund

The Atlantic Canada Opportunities Agency (ACOA) continues to support UNB research. ACOA funding has been steadily increasing over the last 5 years. There were 12 new awards in the 2018-19 fiscal year, with a total of 24 active projects during the year.

ACOA has moved to a continuous intake of proposals model, giving a more rapid flow of projects through the university through ACOA's various programs. During the 2018-19 year, UNB researchers continued to have active projects via the Atlantic Innovation Fund, the Business Development Program, the Atlantic Policy Research Initiative, and the Innovative Communities Fund, as well as within various projects led by industry and partner institutions.

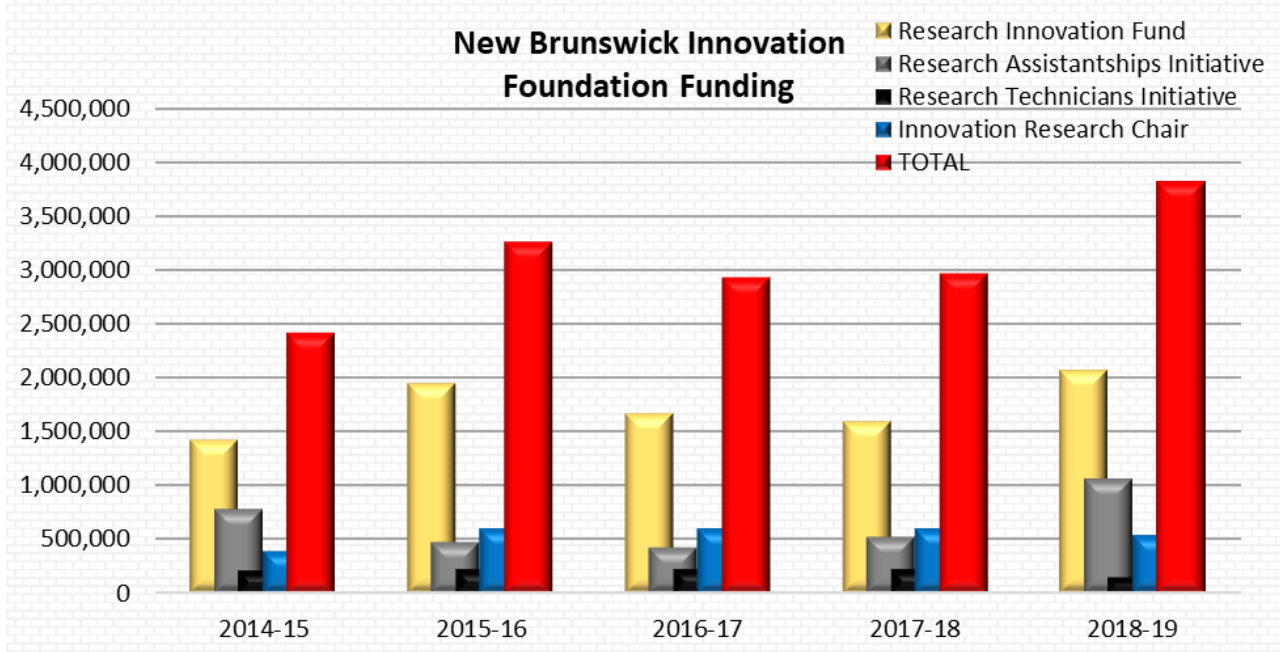
### Canada Foundation for Innovation (CFI)

In 2018-19, UNB was successful in having three new projects approved with a total CFI contribution of \$342,419, plus an additional \$102,726 in CFI Infrastructure Operating Fund awards to help UNB operate and maintain the awarded infrastructure. The awarded amount includes two CFI John R. Evans Leader Fund (JELF) grants for two new Canada Research Chairs at UNB.

UNB researchers are currently leading 12 active CFI infrastructure projects with a contribution of \$1.9 million from the CFI and \$3.5 million from matching sources.

### New Brunswick Innovation Foundation (NBIF)

The New Brunswick Innovation Foundation continued to be a strong supporter of research at UNB. UNB saw an increase in two NBIF programs, and received added funding via the Innovation Research Chair for the fourth year in a row. Total NBIF funding to UNB increased by 29% over last year.



### New Brunswick Health Research Foundation (NBHRF)

NBHRF continues to contribute to UNB research. From 2011-12 to 2013-14, NBHRF contributions to UNB’s research enterprise had been in the \$200K–\$300K range. However, as the graph indicates, since 2014-15 these numbers have increased significantly due in part to funding received for the SPOR Network and the Jarislowsky Chair. Continuing on this positive trend, in the 2018-19 fiscal year over \$1.6M was received, representing an outstanding 25% increase over 2016-17 numbers. This increase was due mostly to funding for the AGEWELL Innovation Hub, the Chiropractic Health Research Chair, matching for CFI, and the Zoomers project for Dr. Danielle Bouchard.

