

Sponsored research revenue 2020-2021

Research funding at Alberta's comprehensive
academic research universities

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Introduction

The Sponsored Research Revenue: Research Funding at Alberta's Comprehensive Academic Research Universities report is produced annually by the Government of Alberta's Ministry of Jobs, Economy and Innovation (JEI). The ministry's annual report and business plan include data derived from this report to demonstrate the capacity and capabilities of Alberta's Comprehensive Academic Research Universities (CARUs).

Sponsored research revenues (SRR) are research funds garnered outside of regular university operating grants. Research contracts, grants and donations are used to support the operating and infrastructure costs of research at institutions, and help institutions make meaningful contributions to advance research priorities. SRR funds also allow researchers to build on and leverage other funding streams, further increasing the impact of overall support in the innovation system, and allowing advancements in the full spectrum of research, from fundamental to translational and applied research.

Research is the systematic investigation of materials, sources, and/or phenomena undertaken to increase knowledge. Fundamental research studies theories and phenomena to obtain new knowledge, while translational and applied research aim to understand how fundamental research can be used to directly benefit society, such as finding cures to diseases discovered in fundamental research. Fundamental, translational and applied research are therefore interdependent and both require consistent funding to lead innovation and grow the economy.

Alberta's CARUs lead the province's research and innovation agenda and can undertake all forms of research. Contributing to this report are Alberta's four CARUs:

- University of Alberta
- University of Calgary
- University of Lethbridge
- Athabasca University

The data in this report is provided directly to the Government of Alberta by the institutions and is derived from a combination of audited financial statements and supplemental financial reports. The data is consistent with the overall SRR totals reported by the institutions to the Canadian Association of University Business Officers (CAUBO).

Note: due to rounding, some totals may not correspond exactly with the sum of the separate figures in the graphs.



Alberta's focus on research and innovation

Alberta has a long history of innovation. It is the ingenuity of Albertan researchers that helped unlock the province's energy resources, and that history of technology and innovation is helping pave the way to a more diversified future. To maintain and expand Alberta's competitive position as a leader in research and innovation, the CARUs continue to build research capacity with a focus on excellence within the following research and commercialization priorities.

Alberta's Research and Commercialization Priorities



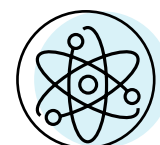
Health and disease prevention



Energy, minerals and clean-tech



Agriculture



Emerging technologies

Alberta's research and commercialization priorities serve to guide the Government of Alberta's investments in research across multiple agencies to ensure we build capacity to pursue and commercialize areas of particular importance to our province. These priorities highlight a selection of significant opportunities and challenges facing Alberta and were established through an industry-post-secondary working group, which convened in 2020. Previously, in 2017, Alberta's government released the Alberta Research and Innovation Framework, which outlined a suite of innovation targets in key sectors intended to inspire collective action and provincial alignment. Since then, the world has transformed as a result of the COVID-19 pandemic, coupled with changes in the energy industry and advancements in technology. This prompted the Government of Alberta to convene the industry-post-secondary working group to refresh the province's research priorities to align with Alberta's future economic opportunities, creating Alberta's Technology and Innovation Strategy and the accompanying Alberta's research and commercialization priorities. By identifying key areas of research that are important to the province, the Alberta Government can focus resources and foster collaboration to accelerate innovation and technology development.

Technology and innovation are essential for growth and success in all industries. From world-class vaccine researchers to exploring applications in artificial intelligence and machine learning, our CARUs are not only developing products and solutions to benefit people in Alberta and across the globe, but are also creating businesses that are transforming our industries, contributing to our vibrant communities and enabling Alberta to add value and strengthen its economy.

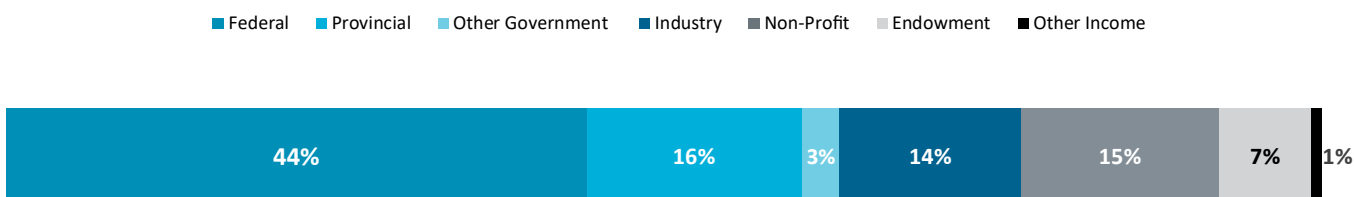
In building our technology and innovation ecosystem, Alberta has garnered federal government support, which continues to remain the largest source of SRR for Alberta CARUs. All orders of government play a critical role in supporting foundational and applied research, de-risking commercial opportunities, developing talent, and driving innovation. Alberta has also developed a strong network of private and public organizations. These organizations play a significant role in supporting research, attracting investment and growing the technology and innovation sector as a whole. The province's largest research and innovation support organization, Alberta Innovates, provides funding, programs, technical expertise, advice and networks to help stimulate research and innovation across the province. Research capacity in Alberta is supported by investments from the Government of Alberta, Alberta Innovates, the federal government, industry, and other sources.

Total SRR

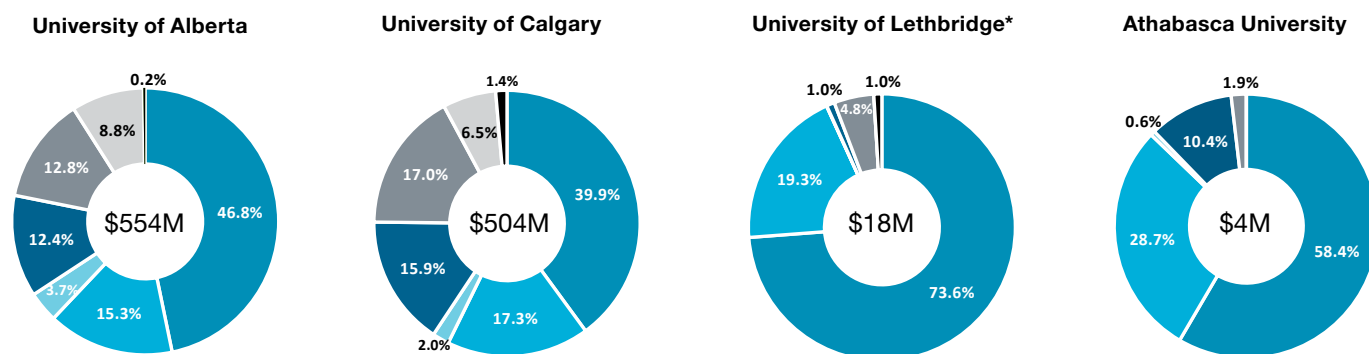
Fiscal 2020-2021

SRR received by Alberta CARUs for the 2020-21 fiscal year was over \$1.08 billion. The majority of these funds were garnered from federal investment (44 per cent), with the next largest contributions from the provincial government (16 per cent), non-profit (15 per cent), and industry (14 per cent) sources.

COMPOSITION OF TOTAL SRR BY SOURCE IN 2020-21 (per cent)



COMPOSITION OF TOTAL SRR BY SOURCE AND INSTITUTION IN 2020-21 (per cent)

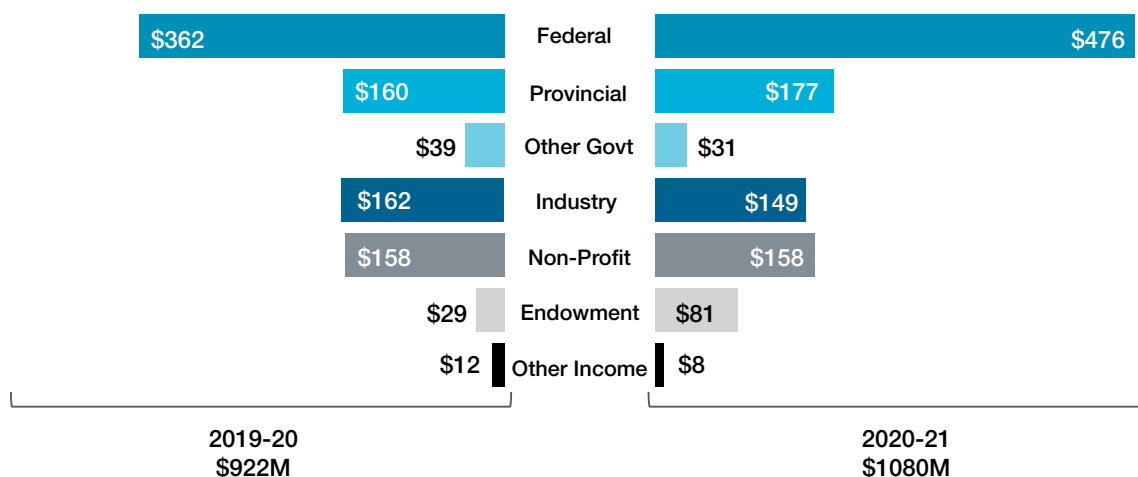


* University of Lethbridge had a negative balance in other government sources, resulting in the sum of the percent totals equalling less than 100%.

Two-year overview

In 2020-21, total SRR increased by 17 per cent from 2019-20 levels, rising from \$922 million to \$1.08 billion. This was largely driven by increases in funding from federal government (31 per cent), provincial government (11 per cent), and endowment (179 per cent) sources. Non-profit sources remained consistent, and slight decreases were seen from other government (21 per cent), industry (8 per cent), and other income (33 per cent) sources.

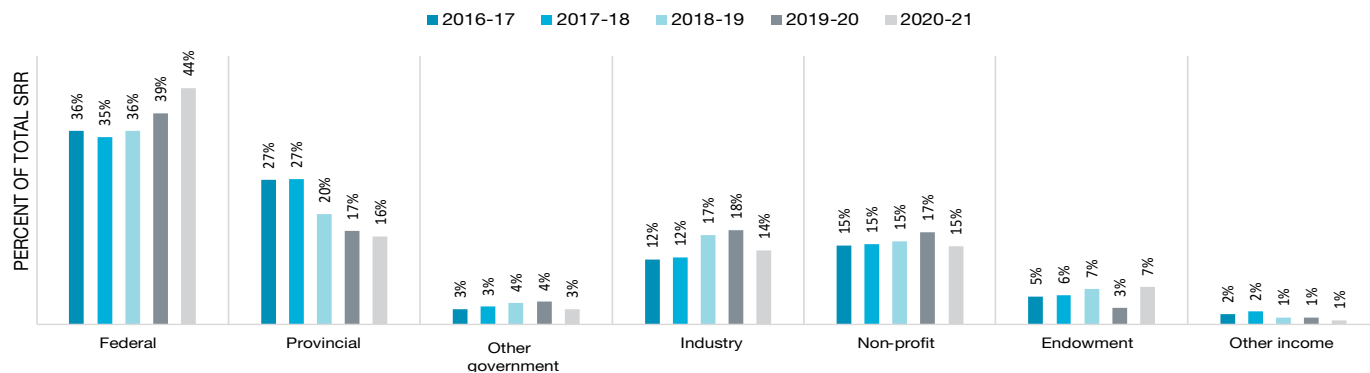
COMPARISON OF TOTAL SRR BY SOURCE IN 2019-20 AND 2020-21 (millions of dollars)



Five-year overview

From 2016-17 to 2020-21, SRR increased modestly from federal, industry, and non-profit funding sources and decreased from provincial and endowment sources. Other government and other income sources remained stable.

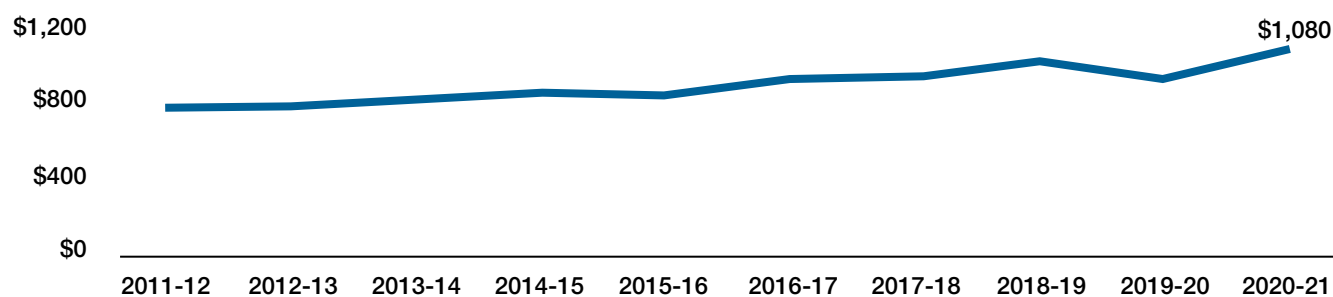
SRR BY SOURCE OVER FIVE YEARS (per cent)



Ten-year overview

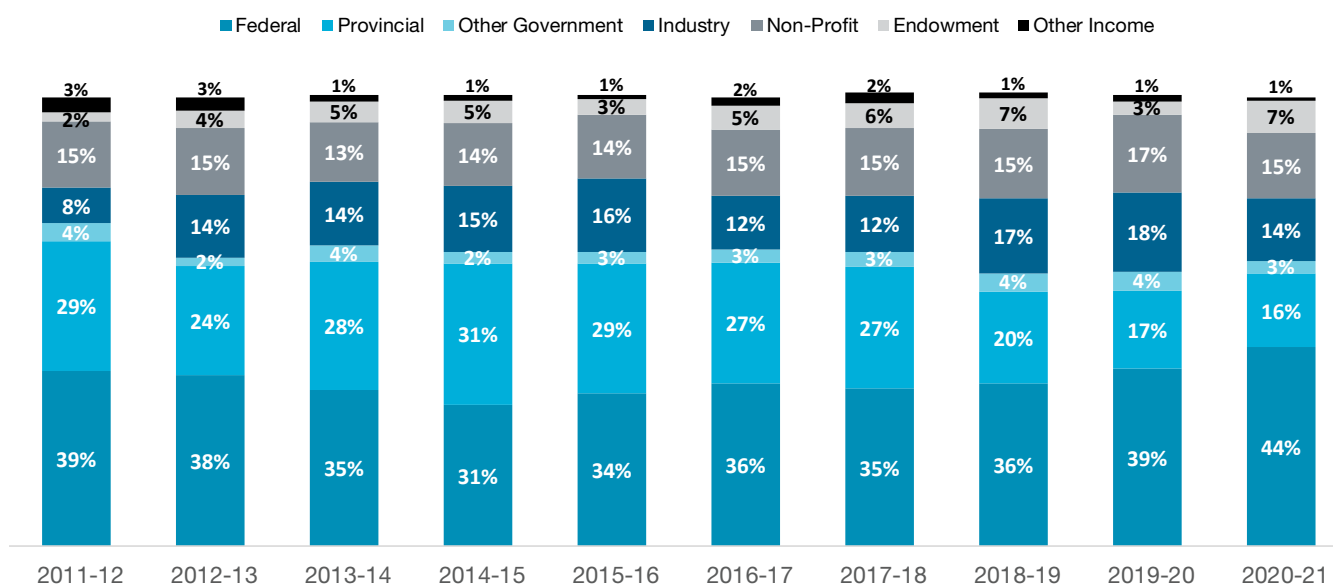
SRR received by Alberta CARUs for the 2020-21 fiscal year totaled over \$1.08 billion, reaching a new high in the past decade. Over 2011-12 to 2020-21, research funding for Alberta's CARUs increased by 42 per cent. This overall increase has enabled Alberta's research-intensive universities to build and strengthen their capacity for innovation and support the retention and attraction of highly skilled talent.

TOTAL SRR OVER TEN YEARS (millions of dollars)



In the past ten years, the proportion of federal government SRR has increased slightly, while provincial government SRR has slightly decreased, highlighting Alberta's increased ability to leverage federal funding. Other sources of SRR have remained relatively constant.

TOTAL SRR OVER TEN YEARS BY SOURCE (per cent)



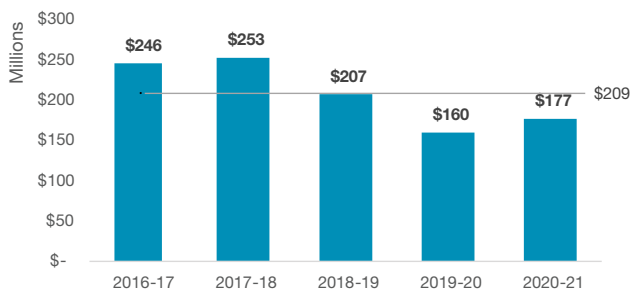


Provincial government SRR sources

Translating knowledge and discoveries into innovative products and processes is a priority for Alberta and is essential to the long-term competitiveness of the province. The Government of Alberta continues to build research capacity at Alberta’s CARUs through ongoing investment in research facilities, faculty, and technicians. This has allowed the province to attract and retain world-class researchers, train students and skilled workers, and contribute to building a highly qualified workforce in Alberta.

Provincial SRR is comprised of funding from JEI, Alberta Innovates, and other Alberta government sources. Funding for 2020-21 totalled \$177 million, an increase from 2019-20, but below the five-year average of \$209 million.

TOTAL PROVINCIAL SRR OVER FIVE YEARS (millions of dollars)

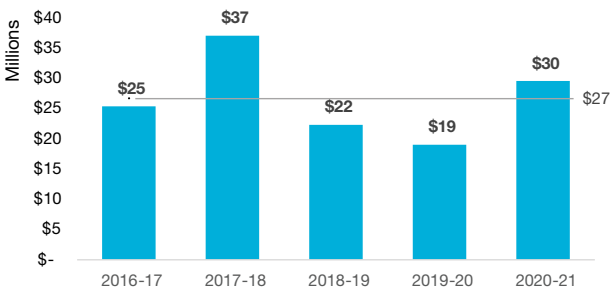


Jobs, Economy and Innovation (JEI)

Alberta’s CARUs are key to the innovation system and contribute significantly to Alberta’s success as a knowledge-driven economy. JEI provides targeted funding for research equipment and industry partnerships at Alberta’s CARUs through the Research Capacity Program (RCP) and other targeted funding. JEI’s RCP is a competitive funding program to support the acquisition of small equipment and large research infrastructure. Targeted and partnership grant funding allow the ministry to provide opportunities for researchers to move innovative ideas from research to commercialization in the market. Through these initiatives, JEI enhances the market success of new products and processes while contributing to environmental, economic, and social benefits for Albertans. This funding also allows researchers to leverage other funding sources, further increasing the impact of provincial support in the innovation system.

In 2020-21, JEI SRR totalled \$30 million, an increase of \$11 million from 2019-20.

JEI SRR OVER FIVE YEARS (millions of dollars)

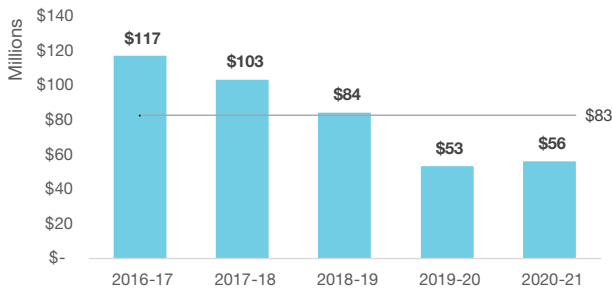


Alberta Innovates

Alberta Innovates is a public agency that operates at arm’s length from the Government of Alberta. JEI is Alberta Innovates’ sole shareholder and main funder. Alberta Innovates provides a suite of funding programs, cross-sectoral expertise, and research facilities to foster innovation in the province. The organization’s funding programs are designed to accelerate commercialization activity and offset research and development costs for researchers, industry, public institutions, and other stakeholders.

Funding from Alberta Innovates reached \$56 million in 2020-21.

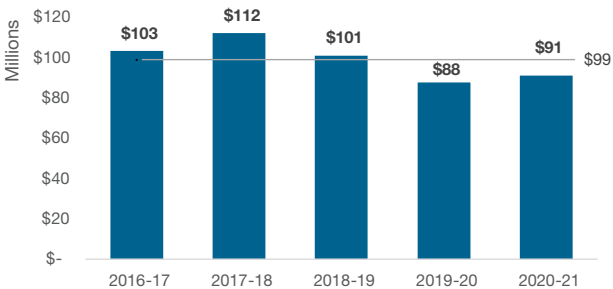
ALBERTA INNOVATES SRR OVER FIVE YEARS
(millions of dollars)



Other Alberta Government Sources

These sources include funding and grants garnered through Alberta ministries, departments, agencies, foundations, and publically funded institutions and centres. In 2020-21, SRR from all other Alberta government sources totalled \$91 million.

OTHER PROVINCIAL SRR OVER FIVE YEARS
(millions of dollars)



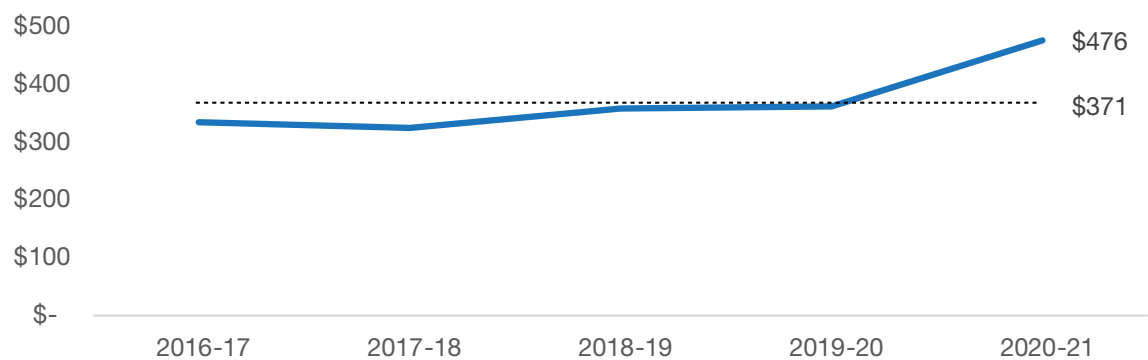


Federal government SRR sources

Federal SRR is comprised of the Canadian Institutes of Health Research (CIHR), the Social Sciences and Humanities Research Council (SSHRC), the Natural Sciences and Engineering Research Council (NSERC), the Canada Foundation for Innovation (CFI), Canada Research Chairs (CRC), the Research Support Fund (RSF), Prairies Economic Development Canada (PrairiesCan), and other federal sources (e.g. Industrial Research Assistance Program and Health Canada).

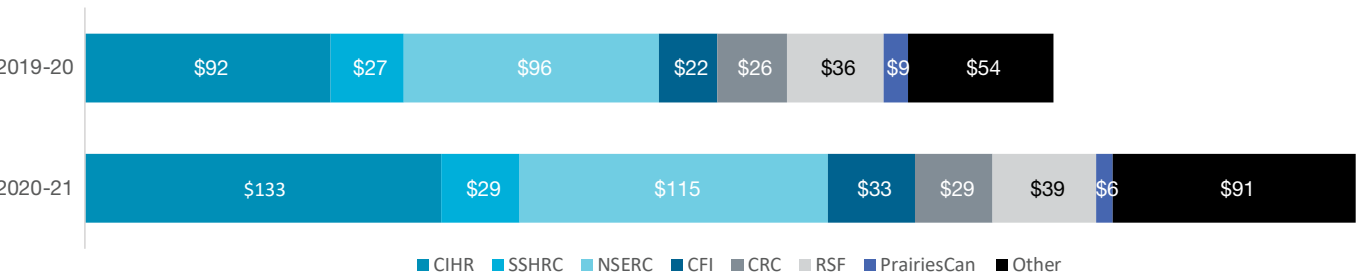
The federal government funding of \$476 million was 28 per cent higher in 2020-21 than the five-year average (2016-17 to 2020-21) of \$371 million, the largest increase in the past five years.

TOTAL SRR OVER FIVE YEARS (millions of dollars)



In 2020-21, federal government funding totalled \$476 million, an increase of 31 per cent from 2019-20 levels. This increase was driven largely by CIHR and NSERC, where funding rose by 45 per cent and 20 per cent, respectively. Increases in funding were also seen from the SSHRC (7%), CFI (50%), CRC (12%), RSF (8%), and other federal sources (69%).

COMPARISON OF SRR FROM FEDERAL SOURCES IN 2019-20 AND 2020-21 (millions of dollars)



Jurisdictional tri-agency funding at Alberta CARUs

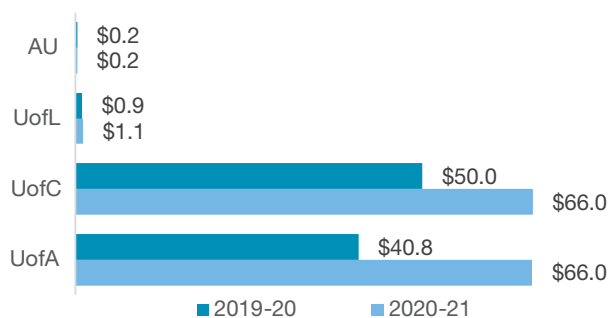
The tri-agency is made up of the CIHR, SSHRC and NSERC. They are major sources of research funding for post-secondary institutions across Canada and comprised a major component of Alberta CARUs SRR sources.

Canadian Institutes of Health Research (CIHR)

CIHR is Canada's federal funding agency for health research. It supports discoveries and innovations that improve the health of Canadians and strengthen the health-care system by providing leadership and support to health researchers and trainees across Canada.

CIHR dispersed \$133 million in funding to Alberta's CARUs in 2020-21, a substantial increase of 45 per cent from 2019-20. The University of Alberta and University of Calgary received the majority of this funding and saw the greatest growth in funds. The University of Lethbridge and Athabasca University received similar amounts to their 2019-20 funding.

COMPARISON OF CIHR SRR FROM 2019-20 TO 2020-21 (millions of dollars)

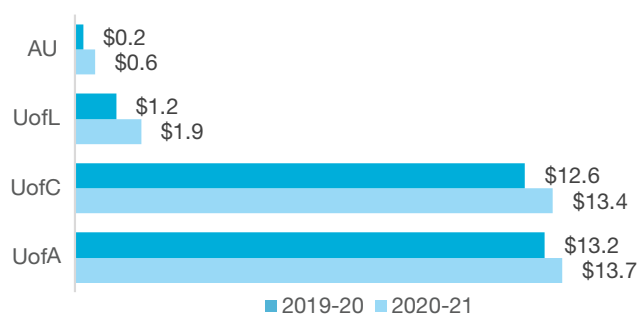


Social Sciences and Humanities Research Council (SSHRC)

SSHRC is the federal research funding agency that promotes and supports post-secondary research and training in the humanities and social sciences.

SSHRC dispersed \$29 million in funding to Alberta's CARUs in 2020-21, an increase of 7 per cent from 2019-20. All CARUs received a slight increase in funds from the previous year, with the University of Alberta and University of Calgary receiving the majority of funding.

COMPARISON OF SSHRC SRR FROM 2019-20 TO 2020-21 (millions of dollars)

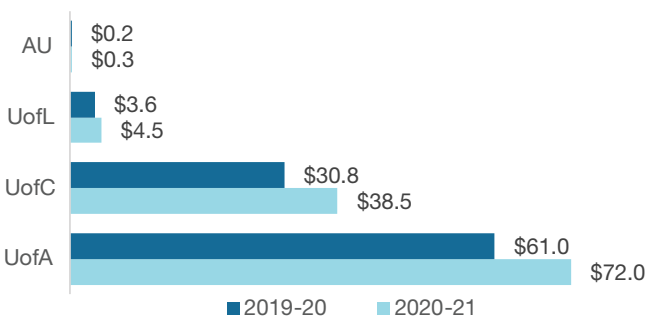


Natural Sciences and Engineering Research Council (NSERC)

NSERC supports innovation and science through investing in people and infrastructure to increase Canada's scientific competitiveness and investing in research and projects involving partnerships between post-secondary institutions and industry.

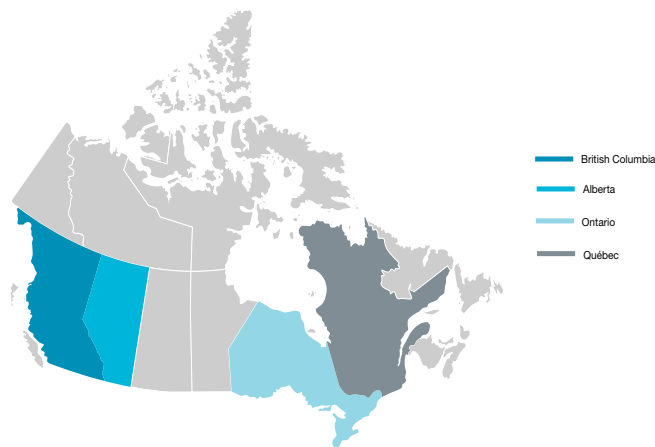
NSERC dispersed \$115 million in funding to Alberta's CARUs in 2020-21, an increase of 21 per cent from 2019-20. The University of Alberta received the majority of this funding, followed by the University of Calgary. The University of Lethbridge and Athabasca University received similar amounts to their 2019-20 funding.

COMPARISON OF NSERC SRR FROM 2019-20 TO 2020-21 (millions of dollars)



National jurisdictional tri-agency funding from all institutions

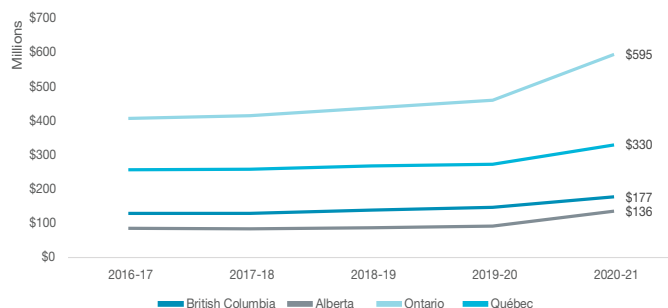
Tri-agency funding is a major source of SRR for all provinces with research intensive institutions. The tri-agency funding in this section reflect total funding across the CARUs and all other post-secondary institutions (PSIs). This data was retrieved from the respective online federal funding databases, and values were retrieved in July 2022.



Canadian Institutes of Health Research (CIHR)

The total amount of CIHR funding dispersed to all parties (including provinces not depicted here) in 2020-21 was \$1.355 billion. Alberta's PSIs received \$136 million, an increase of \$43 million (47 per cent) from 2019-20 levels. Ontario remains the highest funded province, granted almost half of all available funds (44 per cent).

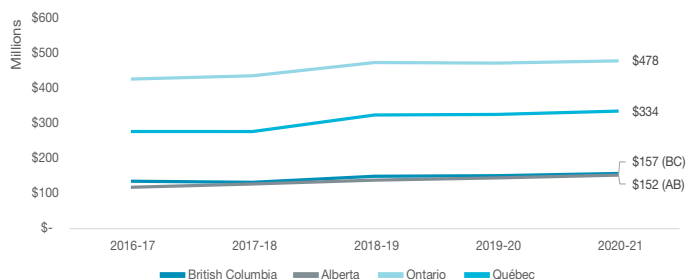
COMPARISON OF CIHR SRR FROM 2019-20 TO 2020-21 (millions of dollars)



Natural Sciences and Engineering Research Council (NSERC)

The total amount of NSERC funding in Canada in 2020-21 was \$1.4 billion. Alberta PSIs received \$152 million, an increase of \$8 million (6 per cent) from 2019-20 levels. Alberta's proportion of NSERC funding has remained stable over the past 10 years.

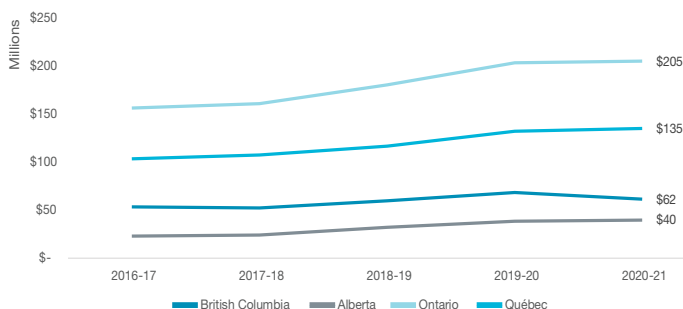
COMPARISON OF NSERC SRR FROM 2019-20 TO 2020-21 (millions of dollars)



Social Sciences and Humanities Research Council (SSHRC)

The total amount of SSHRC funding in 2020-21 was \$499 million. Alberta PSIs received \$40 million in overall funding, an increase of \$1.4 million (4 per cent) from 2019-20 levels.

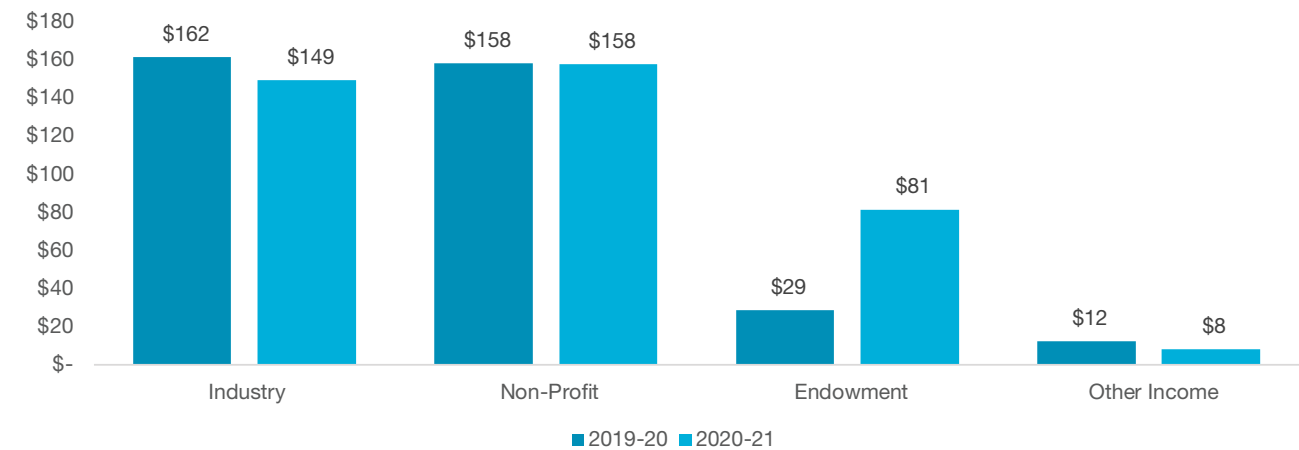
COMPARISON OF NSERC SRR FROM 2019-20 TO 2020-21 (millions of dollars)



Non-government SRR sources

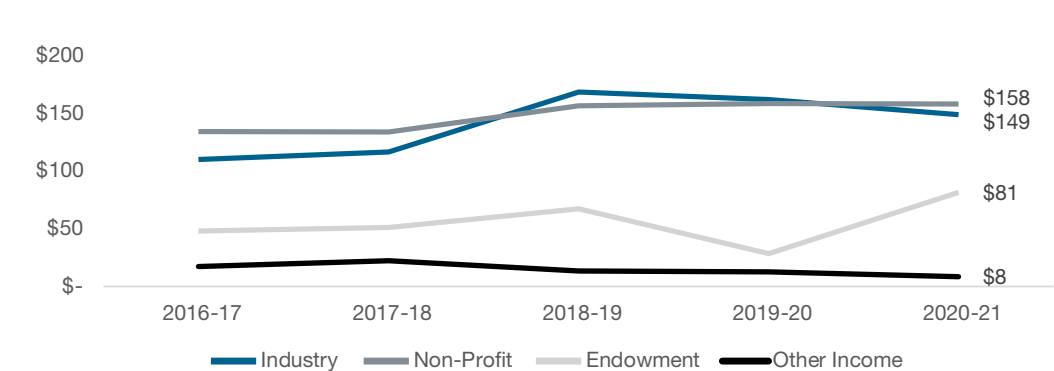
SRR from non-government sources, such as industry, non-profits, and non-government endowments, provided 37 per cent of funding at Alberta’s CARUs in 2020-21. Non-government research funding increased by \$36 million (2 per cent) from 2019-20 levels to \$396 million. This was driven predominantly by the \$52 million (179 per cent) increase in endowment funding. Industry, non-profit, and other income sources all saw a slight combined decline of 5 per cent.

NON-GOVERNMENT SRR BY SOURCE: 2019-20 COMPARED TO 2020-21 (millions of dollars)



Industry and non-profit funding consistently account for the largest portion of non-government SRR, and over the past five years, all non-government SRR sources remained relatively consistent, with a slight increase in funding over time.

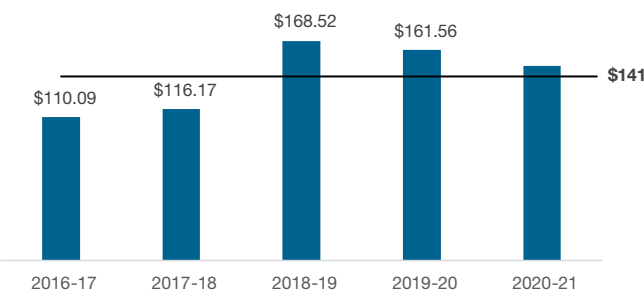
NON-GOVERNMENT SRR BY SOURCE OVER FIVE YEARS (millions of dollars)



Industry

Collaborations between researchers at Alberta's CARUs and industry are a key channel through which innovative research can be translated into the private sector. Industry funding was \$149 million in 2020-21, which is \$8 million (6 per cent) above the five-year average (2016-17 to 2020-21) of \$141 million.

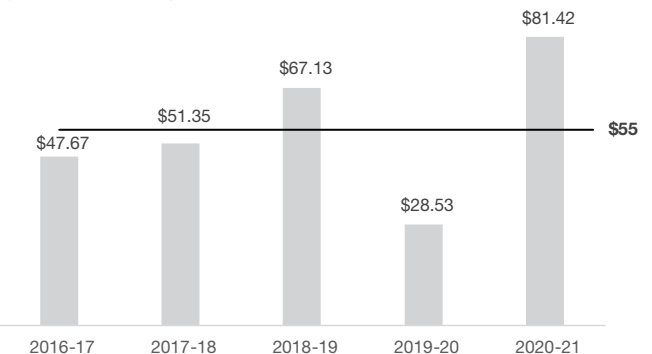
TOTAL SRR FROM INDUSTRY OVER FIVE YEARS
(millions of dollars)



Endowment

Endowment SRR funds are garnered through charitable funds and donations. In 2020-21, endowment funds rose \$26 million (47 per cent) above the five-year average (2016-17 to 2020-21) of \$55 million.

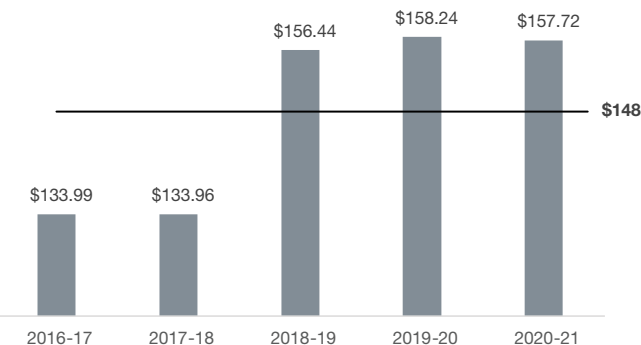
TOTAL SRR FROM INDUSTRY OVER FIVE YEARS
(millions of dollars)



Non-Profit

Funding from the non-profit sector was \$158 million in 2020-21, \$10 million (7 per cent) above the five-year average (2016-17 to 2020-21) of \$148 million.

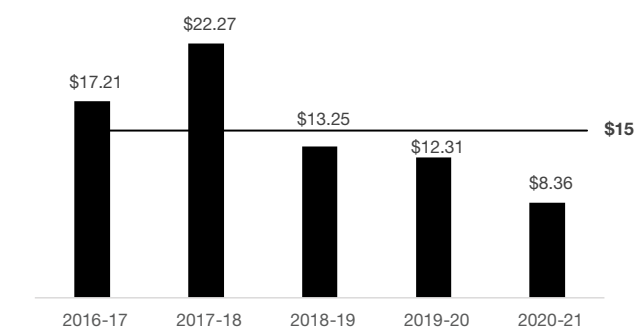
TOTAL SRR FROM NON-PROFITS OVER FIVE YEARS
(millions of dollars)



Other Income

Other income includes SRR that does not fall into the other categories. In 2020-21, other income totalled \$8 million, down \$7 million (47 per cent) from the five-year average (2016-17 to 2020-21) of \$15 million.

TOTAL SRR FROM OTHER INCOME OVER FIVE YEARS
(millions of dollars)



Appendices

Data

SRR Funding Data over ten years (millions of dollars)

SRR Sources	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Federal Government	\$294.966	\$291.473	\$280.967	\$266.297	\$276.588	\$333.910	\$325.271	\$359.098	\$362.350	\$475.753
Provincial Government	\$218.344	\$184.722	\$229.836	\$266.960	\$235.893	\$245.713	\$252.587	\$207.486	\$160.072	\$176.719
Other Government	\$30.371	\$19.244	\$30.764	\$21.156	\$21.213	\$25.494	\$30.995	\$40.671	\$38.867	\$30.798
Industry	\$59.758	\$106.884	\$113.227	\$124.888	\$132.418	\$110.093	\$116.169	\$168.522	\$161.563	\$149.145
Non-Profit	\$112.305	\$112.892	\$107.837	\$118.612	\$115.705	\$133.986	\$133.956	\$156.440	\$158.237	\$157.722
Endowment	\$19.613	\$29.408	\$37.700	\$43.232	\$27.900	\$47.672	\$51.353	\$67.133	\$28.533	\$81.423
Other Income	\$24.194	\$23.224	\$10.998	\$10.021	\$7.881	\$17.209	\$22.271	\$13.248	\$12.311	\$8.362
Grand Total	\$759.551	\$767.847	\$811.329	\$851.166	\$817.598	\$914.077	\$932.602	\$1,012.598	\$921.934	\$1,079.922

Source: This data is provided directly to the Government of Alberta by the Universities of Alberta, Calgary, and Lethbridge, and Athabasca University and is derived from a combination of audited financial statements and supplemental financial reports. The data is consistent with the overall SRR totals reported by the institutions to the Canadian Association of University Business Officers (CAUBO).

SRR Federal Government Funding Data over ten years (millions of dollars)

SRR Sources	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
CIHR	\$66.811	\$64.002	\$65.872	\$69.240	\$68.938	\$75.347	\$76.941	\$86.189	\$91.992	\$133.176
SSHRC	\$17.838	\$15.441	\$14.046	\$15.826	\$16.313	\$16.285	\$16.521	\$21.634	\$27.177	\$29.495
NSERC	\$84.241	\$86.586	\$78.895	\$77.149	\$81.494	\$89.108	\$92.806	\$92.806	\$98.903	\$115.300
CFI	\$35.308	\$28.752	\$42.038	\$19.149	\$22.442	\$22.920	\$22.554	\$32.222	\$21.666	\$32.800
CRC	-	-	-	-	-	\$26.950	\$23.519	\$23.323	\$26.078	\$29.049
RSF	\$31.235	\$31.036	\$30.791	\$31.350	\$30.922	\$33.381	\$33.510	\$33.691	\$36.213	\$38.641
WD	-	-	-	-	-	\$3.689	\$8.468	\$8.796	\$9.148	\$6.274
Other Federal Income	\$59.533	\$65.656	\$49.325	\$53.583	\$56.479	\$64.933	\$50.952	\$54.340	\$54.402	\$91.018
Grand Total	\$294.966	\$291.473	\$280.967	\$266.297	\$276.588	\$332.613	\$325.271	\$353.001	\$365.579	\$475.753

Source: This data is provided directly to the Government of Alberta by the Universities of Alberta, Calgary, and Lethbridge, and Athabasca University and is derived from a combination of audited financial statements and supplemental financial reports. The data is consistent with the overall SRR totals reported by the institutions to the Canadian Association of University Business Officers (CAUBO).

SRR Provincial Government Funding Data over ten years (millions of dollars)

SRR Sources	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
JEI	\$42.419	\$25.809	\$49.089	\$77.889	\$39.852	\$25.308	\$37.052	\$22.313	\$19.036	\$29.506
Alberta Innovates	\$104.621	\$93.973	\$124.560	\$125.561	\$129.549	\$117.075	\$103.256	\$84.285	\$53.385	\$56.188
Other Alberta Government	\$71.304	\$64.940	\$56.187	\$63.510	\$66.492	\$103.330	\$112.279	\$100.888	\$87.651	\$91.024
Grand Total	\$218.344	\$184.722	\$229.836	\$266.960	\$235.893	\$245.713	\$252.587	\$207.486	\$160.072	\$176.719

Source: This data is provided directly to the Government of Alberta by the Universities of Alberta, Calgary, and Lethbridge, and Athabasca University and is derived from a combination of audited financial statements and supplemental financial reports. The data is consistent with the overall SRR totals reported by the institutions to the Canadian Association of University Business Officers (CAUBO).

SRR Non-Government Funding Data over ten years (millions of dollars)

SRR Sources	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Industry	\$59.758	\$106.884	\$113.227	\$124.888	\$132.418	\$110.093	\$116.169	\$168.522	\$161.563	\$149.145
Non-Profit	\$112.305	\$112.892	\$107.837	\$118.612	\$115.705	\$133.986	\$133.956	\$156.440	\$158.237	\$157.722
Endowment	\$19.613	\$29.408	\$37.700	\$43.232	\$27.900	\$47.672	\$51.353	\$67.133	\$28.533	\$81.423
Other Income	\$24.194	\$23.224	\$10.998	\$10.021	\$7.881	\$17.209	\$22.271	\$13.248	\$12.311	\$8.362
Grand Total	\$215.870	\$272.408	\$269.762	\$296.753	\$283.904	\$308.960	\$323.749	\$405.343	\$360.644	\$396.652

Source: This data is provided directly to the Government of Alberta by the Universities of Alberta, Calgary, and Lethbridge, and Athabasca University and is derived from a combination of audited financial statements and supplemental financial reports. The data is consistent with the overall SRR totals reported by the institutions to the Canadian Association of University Business Officers (CAUBO).

Definitions

Comprehensive Academic Research Universities (CARUs) Publicly funded post-secondary institutions that receive financial support from government. Alberta's CARUs include the University's of Alberta, Calgary, and Lethbridge, and Athabasca University.

Endowment sources The range of endowment revenue garnered by the CARUs from donors. Investment income generated by endowments may be used for various purposes, which are often restricted by donors.

Federal Government sources Revenue from Government of Canada sources.

Government of Alberta sources Revenue from Government of Alberta departments and agencies including schools, universities, colleges, and hospitals.

Industry sources SRR obtained from industry and business sources. This category includes donations, grants, and contracts from individuals and business enterprises.

Jobs, Economy and Innovation (Formerly Economic Development, Trade and Tourism) sources Revenue from the department of Jobs, Economy and Innovation, e.g., Research Capacity Program.

Non-government sources Revenue from industry, non-profits, endowments and other income sources

Non-profit sources Refers to SRR obtained from non-profit and community organizations. This category includes donations, grants, and contracts from non-profit and community organizations.

Other Federal sources Revenue from all other federal government sources and agencies not captured in the listed categories (e.g., Canada Space Agency, Health Canada).

Other Government sources Revenue from all government sources other than the Government of Alberta. Includes non-Alberta schools, universities, colleges, and hospitals, municipal governments, other provinces and foreign governments.

Other Government of Alberta sources Revenue from all other Government of Alberta sources not captured by Jobs, Economy and Innovation and Alberta Innovates.

Other income sources SRR obtained from the sale of services and products, and miscellaneous.

Sponsored Research Revenue (SRR) Research funds garnered outside of regular university operating grants.

