

PHSA RESEARCH METRICS

FISCAL YEAR 2021-22

Prepared for:
PHSA Research & Academic Development Committee
Prepared by:
Ellen Chesney, Chief Administrative Officer – Research
Beth Palacios, Consultant
PHSA Research Metrics Working Group
PHSA Data Analytics Reporting and Evaluation

Table of Contents

PHSA RESEARCH METRICS FISCAL YEAR SUMMARY – PHSA OVERALL	5
PHSA AGGREGATE ANALYSIS	6
Producing and Advancing Knowledge.....	6
FIGURE 1 Total PHSA Research Funding by Funding Type and Sub-Type by Fiscal Year.....	6
TABLE 1 COVID-19 Research – FY 2021-22.....	6
FIGURE 2 Total PHSA Research Funding by Fiscal Year and Type.....	7
FIGURE 3 Percentage of PHSA Research Funding by Funding Source Category by Fiscal Year.....	7
FIGURE 4 Percentage of PHSA Research Funding by RISE Sector and Fiscal Year.....	8
FIGURE 5 Percentage of PHSA Research Funding by RISE Sector and Program.....	8
TABLE 2 PHSA Annual Grant Application Success Rate.....	9
FIGURE 6 Total Number of Publications by Program and Category.....	9
Building Research Capacity.....	10
FIGURE 7 Total Number of PHSA Researchers by Category and FY.....	10
TABLE 3 Number of Funded Studies, PI’s, UBC Co-PI’s and Award Amount by Program.....	10
FIGURE 8 Total Number of PHSA Trainees by Fiscal Year.....	11
FIGURE 9 Total Number of PHSA Trainees by Type by Fiscal Year.....	11
Achieving Economic Benefits and Innovation.....	12
FIGURE 10 Total # of Invention Disclosures, Provisional Patent and PCT Applications Filed by Fiscal Year.....	12
FIGURE 11 Total # of National Provisional Patent Applications Filed and Issued by Fiscal Year.....	12
FIGURE 12 License/Assignment Agreements and Spin-Off Companies by Fiscal Year.....	13
FIGURE 13 Total Cumulative Subject Enrollment and # of Clinical Trials by Fiscal Year.....	13
FIGURE 14 PHSA Percent of Clinical Trial Grant Funding Type – Active and Terminated Trials within the FY.....	14
FIGURE 15 Classification of Benefits Summary for All Programs.....	14
BC CANCER RESEARCH INSTITUTE (BCCRI)	15
Producing and Advancing Knowledge.....	15
FIGURE 16 Total BCCRI Research Funding by Funding Type and Sub-type by Fiscal Year.....	15
FIGURE 17 Percentage of BCCRI Research Funding by Funding Source Category by Fiscal Year.....	16
FIGURE 18 BCCRI Research Funding by RISE Sector, Funding Source Category and Type by Fiscal Year.....	17
TABLE 4 BCCRI Annual Grant Application Success Rate.....	18
FIGURE 19 Total Number of BCCRI Publications by Type and Category.....	18
Building Research Capacity.....	18
FIGURE 20 Total Number of BCCRI Researchers by Category and Fiscal Year.....	19
FIGURE 21 Total Number of BCCRI Trainees by Type and Fiscal Year.....	19
Achieving Economic Benefits and Innovation.....	20
FIGURE 22 BCCRI Invention Disclosures, Provisional Patent and PCT Applications by Fiscal Year.....	20
FIGURE 23 BCCRI National Patent Activity by Fiscal Year.....	20
FIGURE 24 BCCRI License Agreements and Spin-Off Companies by Fiscal Year.....	21
TABLE 5 TDO IP Related Revenue.....	21
Advancing Health and Policy Benefits.....	22
TABLE 6 BCCRI Clinical Trials.....	22
FIGURE 25 BCCRI Percentage of Clinical Trial Grant Funding Type – Active and Terminated Trials within the FY.....	22
TABLE 7 BCCRI Top Three Achievements/Accomplishments/Highlights.....	23
BC CHILDREN’S HOSPITAL RESEARCH INSTITUTE (BCCHR)	24
Producing and Advancing Knowledge.....	24
FIGURE 26 Total BCCHR Research Funding by Funding Type and Sub-type by Fiscal Year.....	24
FIGURE 27 Percentage of BCCHR Research Funding by Funding Source Category by Fiscal Year.....	25

FIGURE 28 BCCHR Research Funding by RISE Sector, Funding Source Category and Type by Fiscal Year	26
TABLE 8 BCCHR Annual Grant Application Success Rate.....	27
FIGURE 29 Total Number of BCCHR Publications by Type and Category	27
TABLE 9 BCCHR Social Media Statistics	28
Building Research Capacity.....	28
FIGURE 30 Total Number of BCCHR Researchers by Category	28
FIGURE 31 Total Number of BCCHR Trainees by Type	29
Achieving Economic Benefits of Innovation	29
FIGURE 32 BCCHR Invention Disclosures, Provisional Patent and PCT Applications Filed by Fiscal Year	29
FIGURE 33 BCCHR National Patent Activity by Fiscal Year	30
FIGURE 34 BCCHR License/Assignment Agreements and Spin-off Companies by Fiscal Year.....	30
TABLE 10 BCCHR IP Related Revenue	31
Advancing Health and Policy Benefits.....	31
TABLE 11 BCCHR Clinical Trials	31
FIGURE 35 BCCHR Percentage of Clinical Trial Grant Funding Type – Active and Terminated Trials within the FY	32
TABLE 12 BCCHR Top Three Achievements/Accomplishments/Highlights	33
BC MENTAL HEALTH & SUBSTANCE USE SERVICES RESEARCH INSTITUTE (BCMHSUS).....	34
Producing and Advancing Knowledge.....	34
FIGURE 36 BCMHSUS Research Funding by Funding Type and Sub-type by Fiscal Year	34
FIGURE 37 Percentage of BCMHSUS Research Funding by Funding Source Category by Fiscal Year	35
FIGURE 38 Total BCMHSUS Research Funding by RISE Sector, Funding Source Category and Type by Fiscal Year.....	36
TABLE 13 BCMHSUS Annual Grant Application Success Rate	37
FIGURE 39 Total Number of BCMHSUS Publications by Type and Category.....	37
Building Research Capacity.....	38
FIGURE 40 Total Number of BCMHSUS Researchers by Category	38
FIGURE 41 Total Number of BCMHSUS Trainees by Category	38
Advancing Health and Policy Benefits.....	39
TABLE 14 BCMHSUS Clinical Trials	39
FIGURE 42 BCMHSUS Percentage of Clinical Trial Grant Funding Type – Active and Terminated Trials within the FY	39
TABLE 15 BCMHSUS Top Three Achievements/Accomplishments/Highlights	40
BC CENTER FOR DISEASE CONTROL/UBC CDC (BCCDC).....	41
Producing and Advancing Knowledge.....	41
FIGURE 43 Total BCCDC Research Funding by Funding Type and Sub-type by Fiscal Year	41
FIGURE 44 Percentage of BCCDC Research Funding by Funding Source Category by Fiscal Year.....	42
FIGURE 45 Total BCCDC Research Funding by RISE Sector, Funding Source Category and Type by FY	43
TABLE 16 BCCDC Annual Grant Application Success Rate.....	44
FIGURE 46 Total Number of BCCDC Publications by Type and Category	44
Building Research Capacity.....	45
Figure 47 Total Number of BCCDC Trainees by Type.....	45
Advancing Health and Policy Benefits.....	45
TABLE 17 BCCDC Clinical Trials	45
TABLE 18 BCCDC Top Three Achievements/Accomplishments/Highlights	46
WOMEN’S HEALTH RESEARCH INSTITUTE (WHRI).....	47
Producing and Advancing Knowledge.....	47
FIGURE 48 Total WHRI Research Funding by Funding Type and Sub-type by Fiscal Year	47
FIGURE 49 Percentage of WHRI Research Funding by Funding Source Category by FY	48
FIGURE 50 Total WHRI Research Funding by RISE Sector, Funding Source Category and Type by Fiscal Year	49

TABLE 19 WHRI Annual Grant Application Success Rate	50
FIGURE 51 Total Number of WHRI Publications by Type and Category	50
TABLE 20 WHRI Social Media Statistics	51
Building Research Capacity	51
Figure 52 Total WHRI Membership by Category.....	51
Figure 53 Total Number of WHRI Trainees by Type.....	52
Advancing Health and Policy Benefits	52
TABLE 21 WHRI Clinical Trials	52
FIGURE 54 WHRI Percentage of Clinical Trial Grant Funding Type – Active and Terminated Trials within the FY	53
TABLE 22 WHRI Top Three Achievements/Accomplishments/Highlights	54
REGISTRIES & DATASETS	55
Advancing Health and Policy Benefits	55
Supporting Research Activities	57
TABLE 23 Research Activities Supported by Registries and Datasets.....	57
TABLE 24 Provision of Data to external Data Sets by Registry	58
Nature of Research Activities	59
FIGURE 55 Ranking of Predominant Nature of Research Questions Using Data from the Registries/Datasets	59
FIGURE 56 Research Access Requests and Approvals from Registry/Dataset by Fiscal Year	59
APPENDIX 1 - GLOSSARY	60

PHSA RESEARCH METRICS FISCAL YEAR SUMMARY – PHSA OVERALL

Indicator		Key Measure Description	FY 2019-20	FY 2020-21*	FY 2021-22
			Value	Value	Value
Producing & Advancing Knowledge	1a	Total Annual Grant Awards by Type (including Major CFI Infrastructure grants)	\$145,597,847	\$148,523,543	\$177,100,074
		Salary Awards	13,788,858	14,651,948	13,811,897
		Infrastructure Awards	7,011,184	4,717,341	8,077,745
		Operating Grants	119,979,796	125,818,541	155,130,637
		Other	4,818,009	3,335,713	79,795
		COVID-19 Research Funding (included in above categories)	NA	\$9,538,864	13,520,117
	1b	Total Annual Grant Awards by RISE Sector (including Major CFI infrastructure grants)			
		Government	66,778,795	84,988,757	76,344,423
		Non-Profit	60,676,760	47,325,166	76,328,230
		Industry	18,142,292	16,209,620	24,427,421
1c	CIHR Annual Grant Application Success Rate - PHSA Overall/ Nat'l				
	Fall Project Grant	25.3%/15.7%	22.4%/19.0%	28.1%/26.0%	
	Spring Project Grants	19.7%/16.9%	22.0%/20.3%	29.2%/22.3%	
1d	Total # of Publications w/ Program Author				
	BCCHR	1,060	1,117	1,284	
	BCCRI	744	776	761	
	WHRI	752	950	1,006	
	BCCDC	161	243	301	
	BCMHSUS	127	133	151	
Building Research Capacity	2a	Total # of Research Trainees	2,601	2,663	2,917
	2c	Total # of Researchers (excluding Category 3 – Affiliate Investigator)	827.5	952	940.5
	2e	Research Support Fund Grants (Tri-Council only)	\$4,063,179	\$4,102,759	\$4,303,669
Achieving Economic Benefits & Innovation	3a	# of Invention Disclosures	32	40	35
		# of Provisional Patent Applications Filed	24	18	17
		# of PCT Applications Filed	9	7	8
		# of Patents Filed/Issued	11/21	20/21	115/30
	3b	# Active License Agreements	123	125	130
		# of Spin-off Companies	17	18	19
	IP Related Revenue – Realized Revenue				
	BCCRI	\$432,697	\$1,117,445	\$2,210,216	
	BCCHR	\$93,000	\$665,041	\$1,209,525	
Advancing Health & Policy Benefits	4a	Clinical Trials (including Non-PHSA PIs utilizing PHSA facilities and resources)			
		# active trials at the end of the FY	656	657	695
		Cumulative Subject Enrollment-end of FY	21,400	20,591	36,287
4b	Registries as Research Resources				
	# of Research Requests/Approvals	236/226	208/193	273/257	

*FY 20-21 Award Totals are re-stated to include the Canada Research Continuity Emergency Fund (CRCEF) amounts

PHSA AGGREGATE ANALYSIS

Producing and Advancing Knowledge

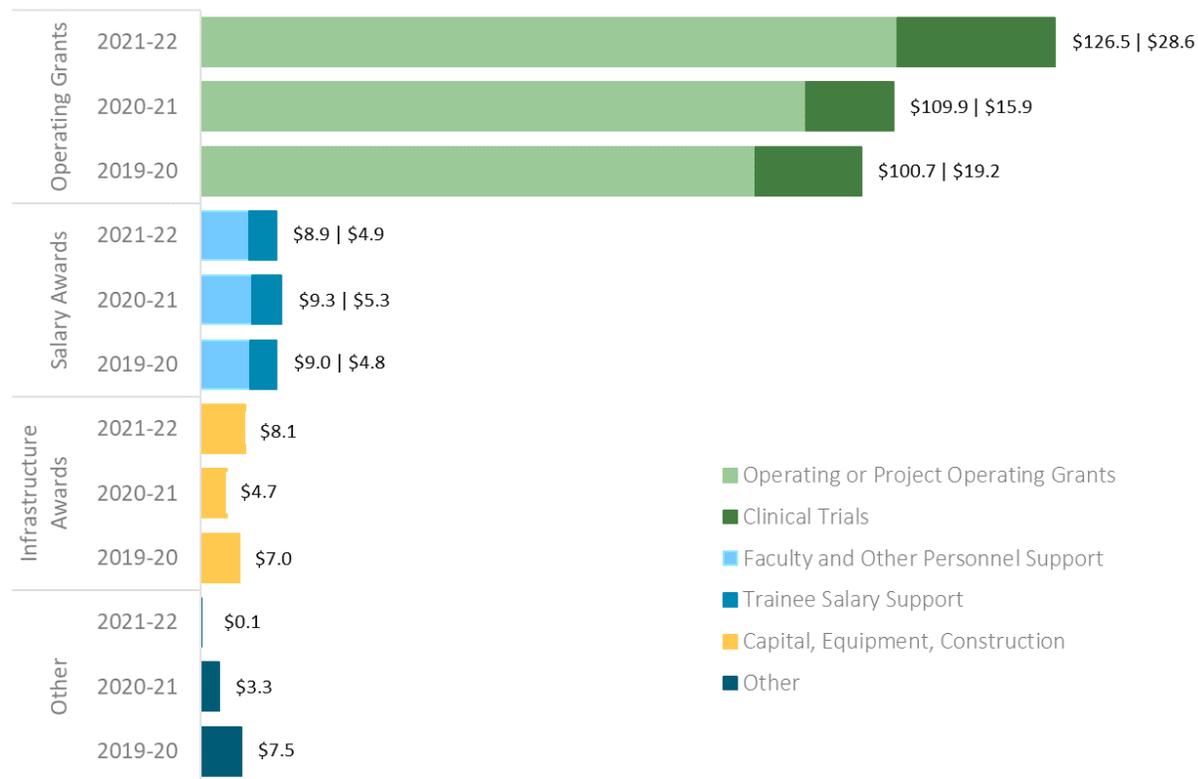
In FY 2021-22, researchers affiliated with PHSA were awarded a total of \$171,100,074, an increase of 19.2% from FY 2020-21. This large increase is partly due to the reductions in funding seen last year due to the COVID-19 pandemic and the overall increase in non-profit funding opportunities available this year. In addition, the total award funding for FY 2020-21 has been restated to include the \$8.5 million dollar Canada Research Continuity Emergency Fund (CRCEF) grants, the temporary program to help sustain the research enterprise during the COVID-19 pandemic.

Operating grants continue to make up the largest portion (88%) of total funding received. Operating grants support

specific, time-limited research projects. While operating grants are the “bread and butter” of research grants, salary awards are important to provide researchers with the protected time to successfully compete for operating grants and represent 10% of total awards for the past five fiscal years. A breakdown of funding types and subtypes by fiscal year can be found in Figure 1. For FY 2021-22, the subtype of Operating or Project Operating Grants garnered the largest portion of research funding.

See Table 1 for breakdown of COVID-19 related research funding by program.

FIGURE 1 Total PHSA Research Funding by Funding Type and Sub-Type by Fiscal Year



(values are in millions)

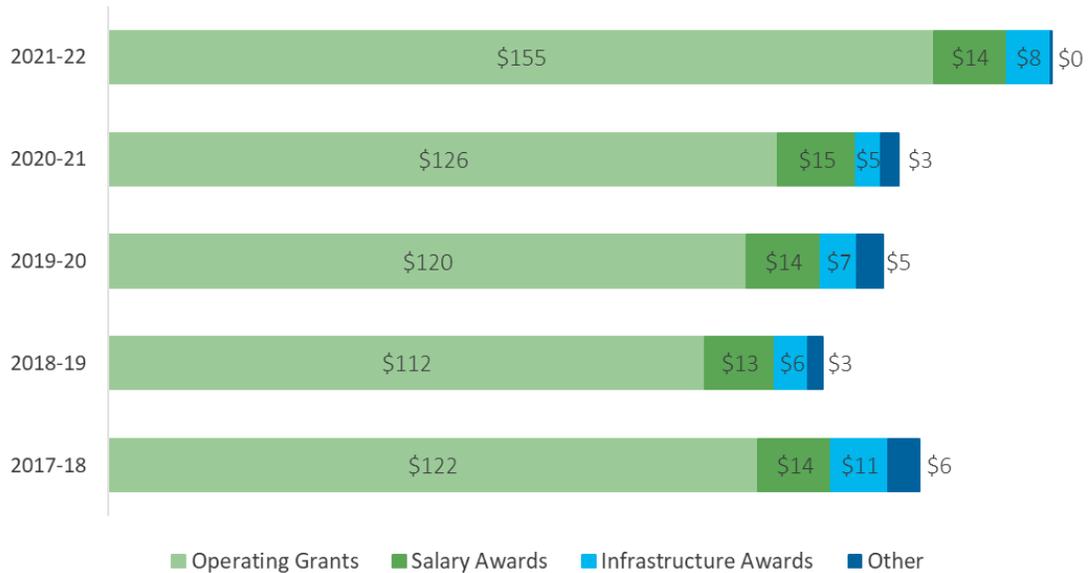
TABLE 1 COVID-19 Research – FY 2021-22

Program	TOTAL
BCCRI	\$1,740,209
BCCHR	\$5,955,314
WHRI	\$2,831,029
BCCDC	\$2,869,560
BCMHSUS	\$124,005
TOTAL	\$13,520,117

Research Support Fund grants total \$4,303,669 and represent funding to support the indirect costs of research for tri-council awards but is not included in total research funding or the figures below. Because research support is a shared expense between UBC and PHSA research

programs, PHSA has negotiated to receive 66% of the applicable UBC Research Support grant. Figure 2 shows Total Research Funding by Fiscal Year and Type for the past five fiscal years.

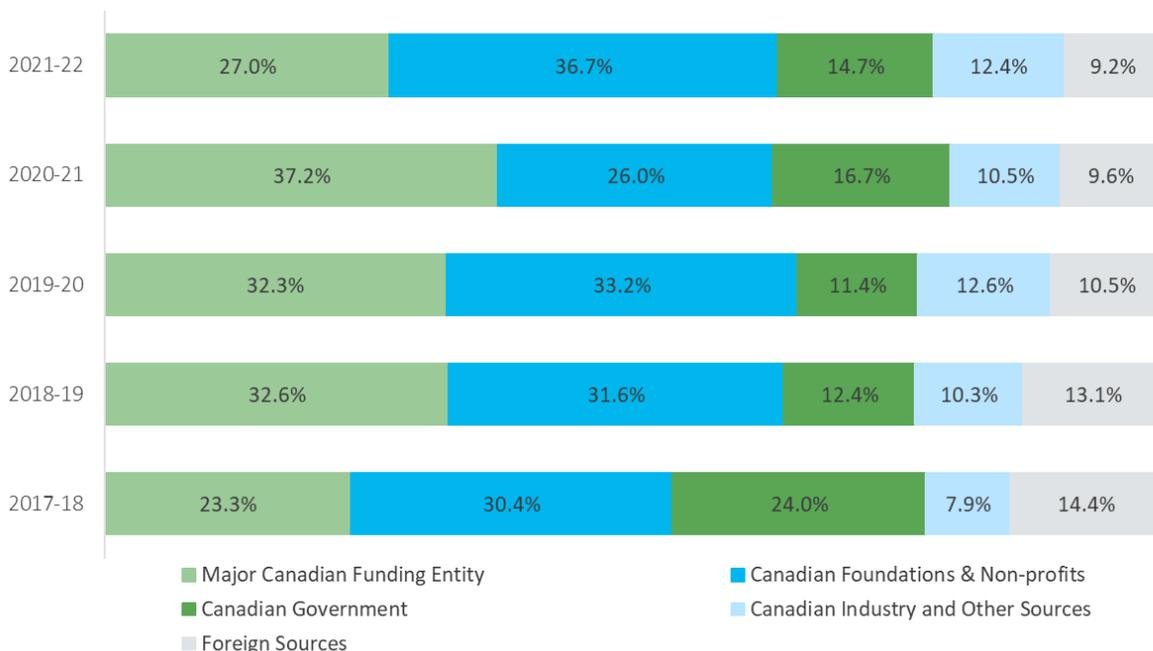
FIGURE 2 Total PHSA Research Funding by Fiscal Year and Type



A comparison of funding source by source category over five (5) fiscal years can be found in Figure 3. This figure, generated by compiling hundreds of potential sources into five categories, highlights the extent to which primary sources of funding vary from year to year. This year, Major Canadian Funding entities and Canadian Foundations &

Non-profit sources represent 63.7% of the total funding. Canadian Foundations & Non-profits had the largest share of funding in the past 5 years. Canadian Industry and Other sources are increasing as foreign sources continue to decline.

FIGURE 3 Percentage of PHSA Research Funding by Funding Source Category by Fiscal Year



In addition to the above, Figures 4 and 5 show the same award data by RISE sector (see Glossary – Appendix 1, pg. 63, for sector definition) both by fiscal year and by program for five fiscal years.

FIGURE 4 Percentage of PHSA Research Funding by RISE Sector and Fiscal Year

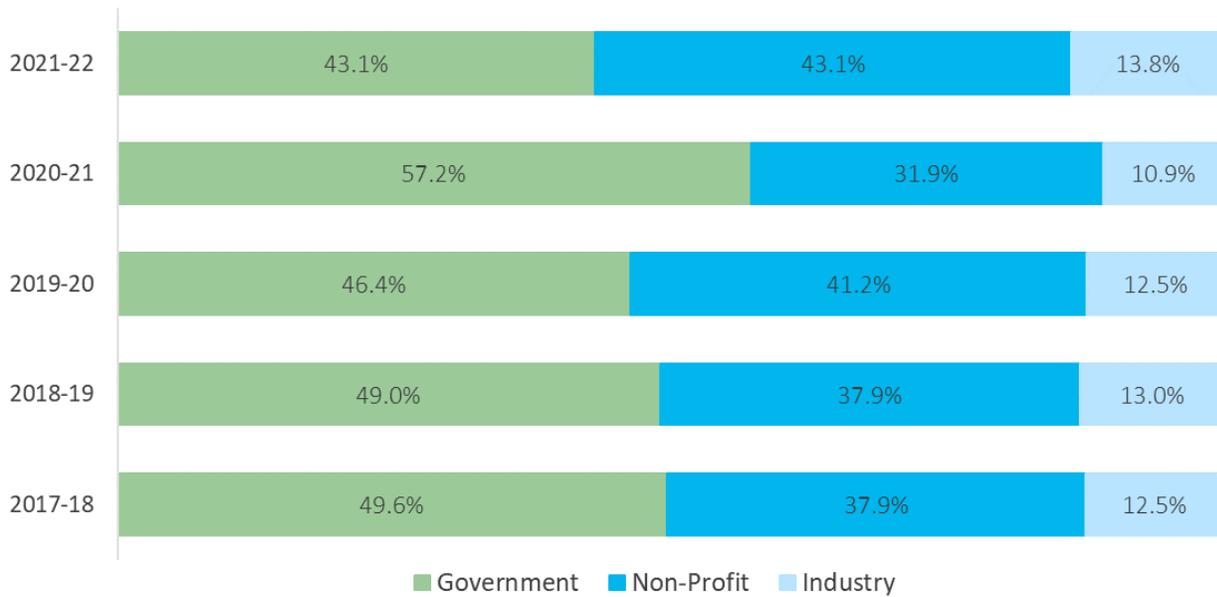
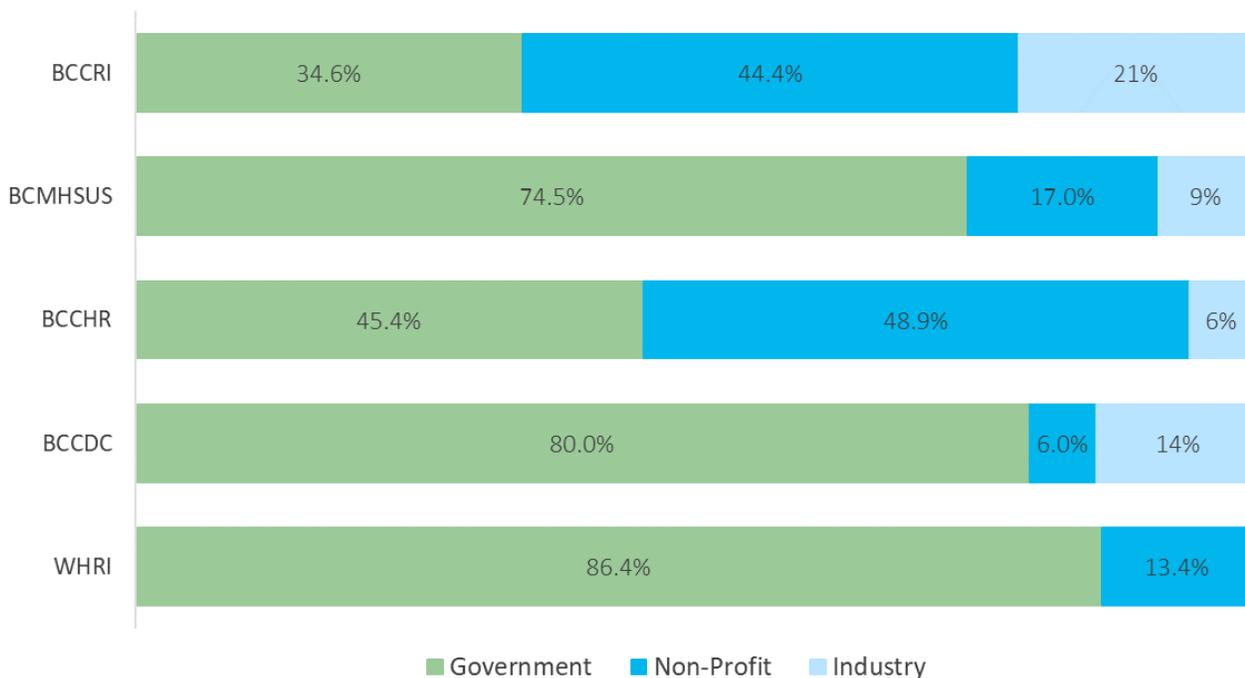


Figure 5 shows the percentage of funding by RISE sector and program for FY 2021-22. This graph reflects the variations in funding sources for all PHSA research entities, as BCMHSUS, BCCDC and WHRI rely heavily on government funding.

FIGURE 5 Percentage of PHSA Research Funding by RISE Sector and Program



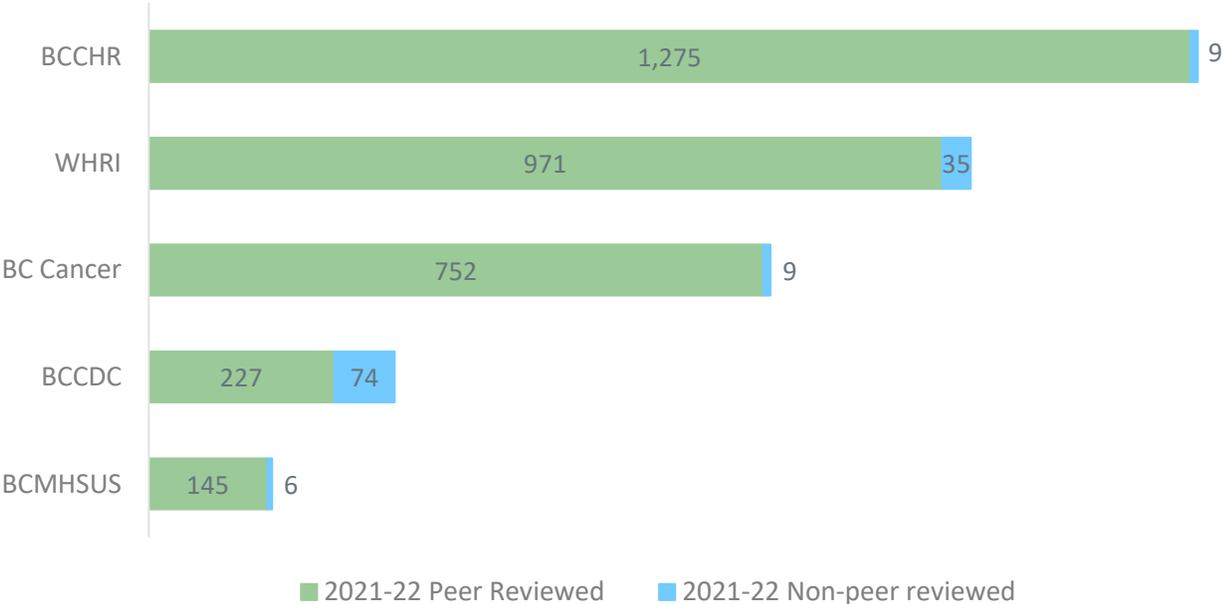
The application success rate is reported for the Fall 2021 and Spring 2022 CIHR project grant competitions. Results (see table 2) are shown for National and PHSA research entities combined. PHSA enjoyed success in both Project Grant programs and was above the national averages resulting in 39 awards.

TABLE 2 PHSA Annual Grant Application Success Rate

Grant Funding Opportunity	National Overall Results % (Approved/Submitted)	PHSA Results % (Approved/Submitted)
2021-09 Project Grant	26.0% (523/2,014)	28.1% (18/64)
2022-03 Project Grant	22.3% (468/2,095)	29.2% (21/72)

Statistics for publications were collected utilizing SciVal with Scopus as the source. Publications were collected in the categories of books, book chapters, peer-reviewed publications inclusive of published journal articles, case reports, essays, literature reviews, and reports produced for government. See Figure 6 for a breakdown of total publications by program and category. Totals are reported by calendar year for all programs. A breakdown by types is shown in the program specific sections due to low sample size.

FIGURE 6 Total Number of Publications by Program and Category



Building Research Capacity

PHSA research entities identified 940.5 researchers in categories 1, 2, and 5 in FY 2021-22, down 11.5 from FY 20-21 (see Figure 7). The decrease is attributed to a reduction in Category 2 researchers. Category 3 researchers are defined as Affiliate Investigators and represent those researchers with a primary affiliation with a research or academic institution external to PHSA, but who wish to remain collaborators with PHSA researchers. PHSA does not track category 3 members funding, publications, or trainees. Details on affiliate members can be found in each program section. BCMHSUS, BCCHR and BCCRI are able to

report their researchers utilizing BCCHR defined categories, which highlight the amount of time protected for research purposes. BCCDC and WHRI define researchers utilizing a methodology that best reflects the type of work and relationships they have with their researchers. Further information on these methods can be found in specific program sections. An attempt to count each researcher only once was made by attributing each researcher to the entity where the bulk of salary and/or support are received. Category 1 researchers are best positioned to compete for external grants.

FIGURE 7 Total Number of PHSA Researchers by Category and FY

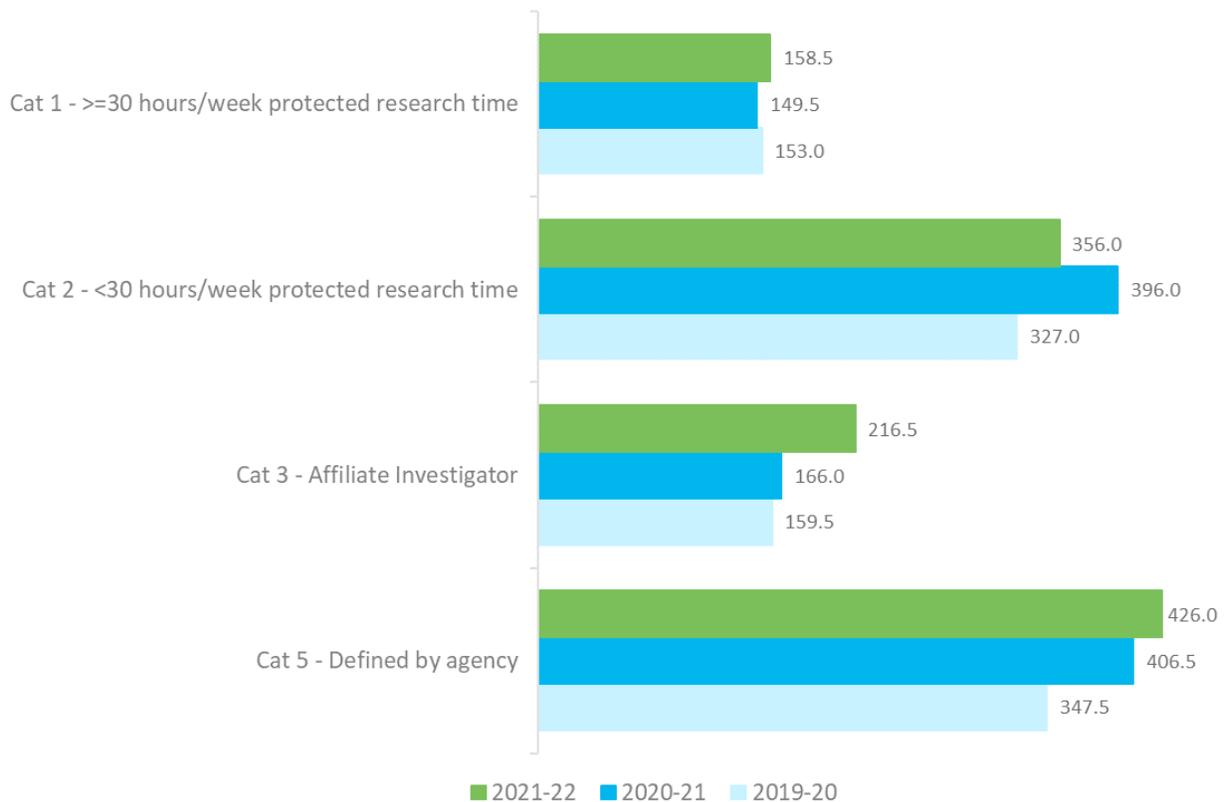


Table 3 provides summary statistics by program at the Principal Investigator (PI) level. PHSA received funding for 451 Principal Investigators collaborating with 1,578 UBC co-investigators for 1,494 unique studies in FY 2021-22. This

excludes Salary and Other award types as these are not designated for specific studies and the number of co-investigators from other academic institutions.

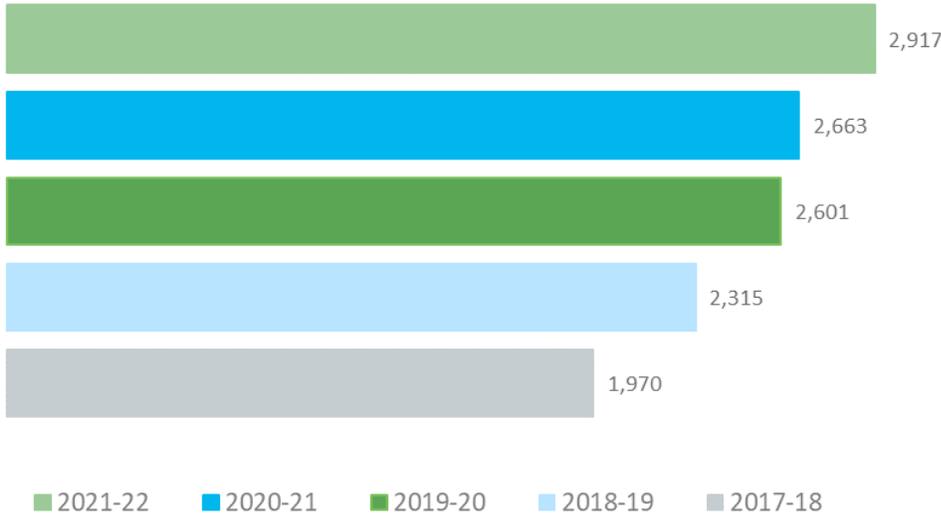
TABLE 3 Number of Funded Studies, PI's, UBC Co-PI's and Award Amount by Program

Program	# of Unique Studies	# of Unique PI's by Program	# of UBC Co-PIs by Program	Total Award Amount
BCCRI	660	188	536	\$91,635,230
BCCHR	691	185	744	\$56,932,271
WHRI	75	34	176	\$8,475,108
BCCDC	51	37	111	\$5,128,406
BCMHSUS	17	7	11	\$1,037,367
Grand Total	1,494	451	1,578	\$163,208,382

During FY 2021-22, PHSA researchers provided training and supervision to a total of 2,917 research trainees, an increase of 254 from FY 2020-21. This is a significant metric because the training of Post-doctoral fellows (PDFs), Doctoral, and Masters Trainees in particular is a major indicator of the degree to which PHSA and its research entities are supporting their academic mandate and

ensuring the next generation of highly qualified research personnel. In addition, Post-doctoral fellows and Doctorals contribute significantly to the conduct of research under the supervision of principal investigators. See Figure 8 and 9 for the number of trainees by type and fiscal year for PHSA overall.

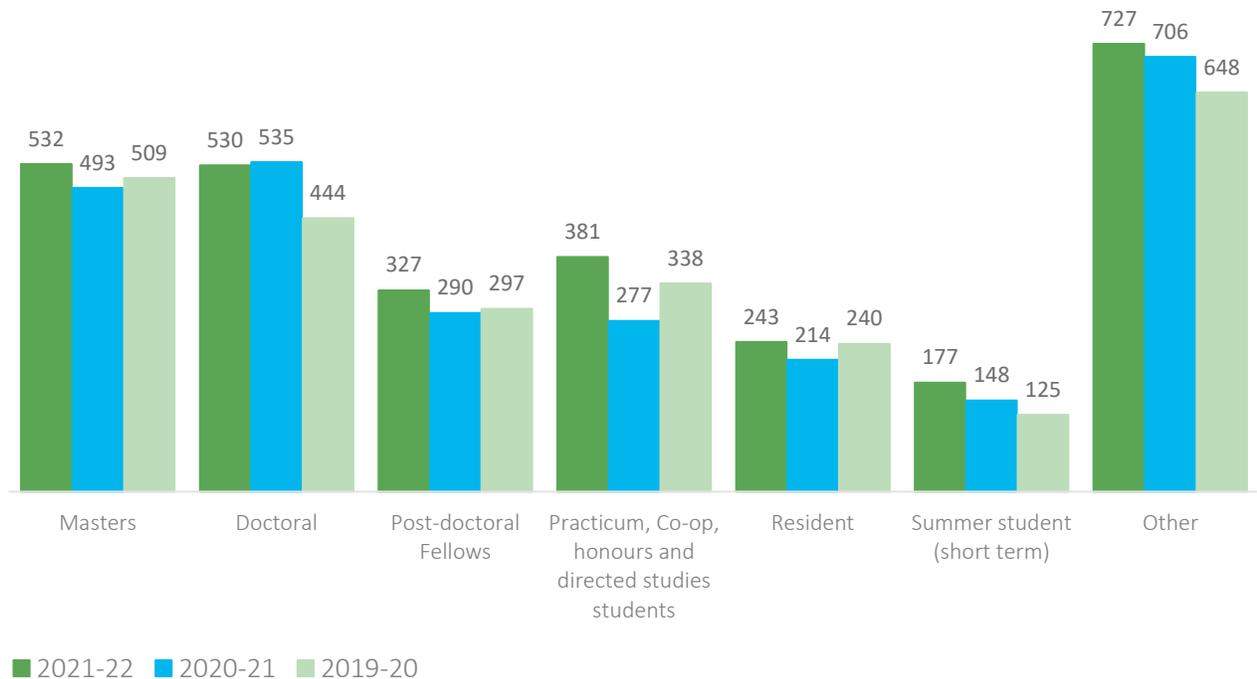
FIGURE 8 Total Number of PHSA Trainees by Fiscal Year



The breakdown of trainees stayed relative the same for the past three years with the largest increase seen in the

Practicum, Co-op, honours and directed studied students' category in FY 2021-22.

FIGURE 9 Total Number of PHSA Trainees by Type by Fiscal Year



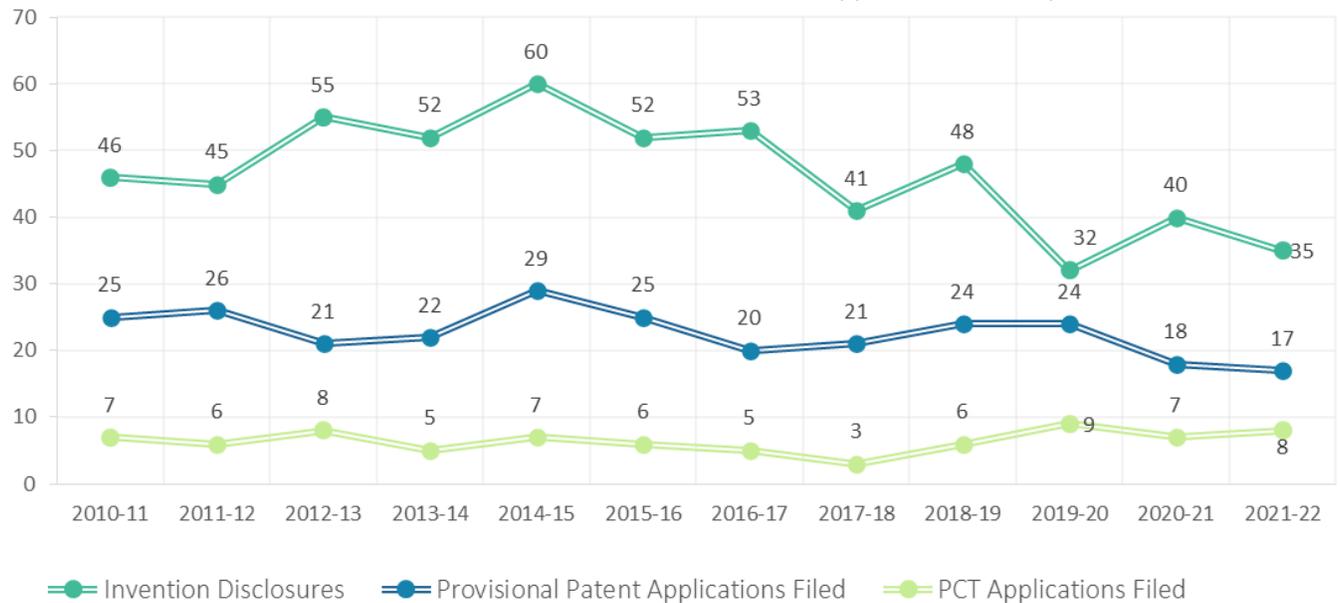
Achieving Economic Benefits and Innovation

The patent process, along with data on licensing and spin-off companies, is provided to measure the commercialization of discoveries, and other economic benefits resulting from these discoveries. Data are included for BCCRI (through the TDO), and BCCHR (through UILO). Program specific IP related revenue data is provided in program sections.

applications filed by fiscal year. Invention disclosures are primarily internal documents, filed with TDO to inform the decision of whether or not to proceed with the patent process. The next stage in the patent process is to file provisional patent applications followed by patent cooperative treaties, or PCTs, which act as a gateway to world-wide patents, each step involving greater specificity.

See Figure 10 for total number of invention disclosure, provisional patent and patent cooperative treaties (PCT)

FIGURE 10 Total # of Invention Disclosures, Provisional Patent and PCT Applications Filed by Fiscal Year



See Figure 11 for the number of national provisional patent applications filed and issued. Applications filed in a given year represent different applications than those which are

approved in that same year. Patent applications licensed to start ups Alpha 9 and Innovakine account for the large increase in FY 2021-22.

FIGURE 11 Total # of National Provisional Patent Applications Filed and Issued by Fiscal Year

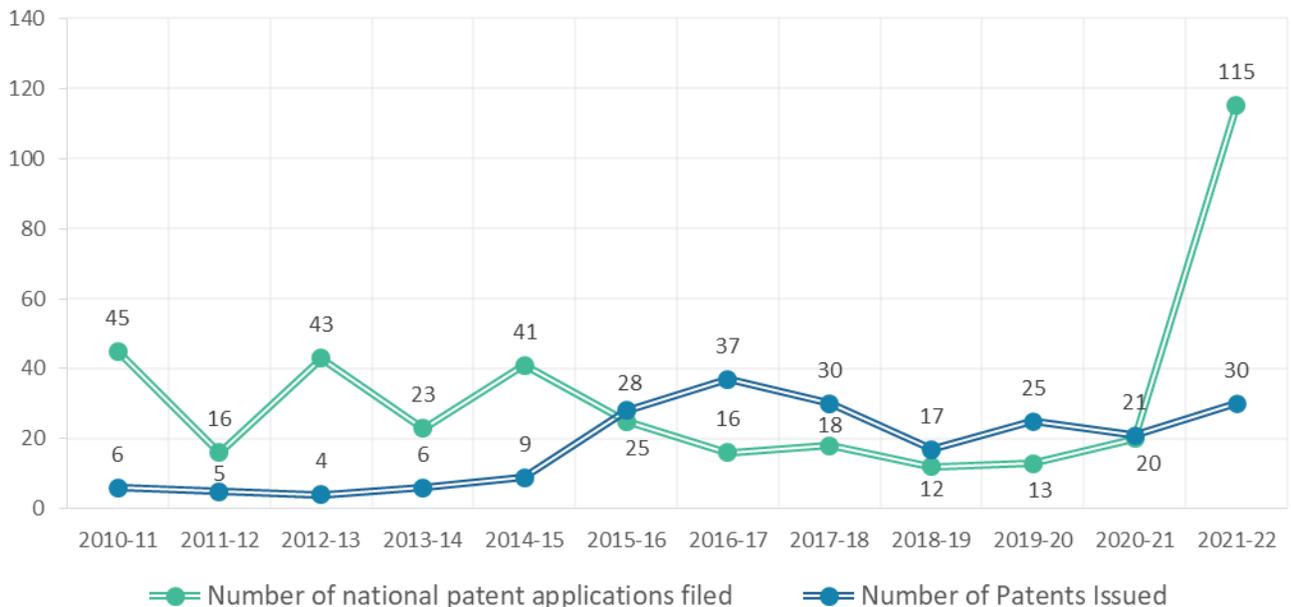
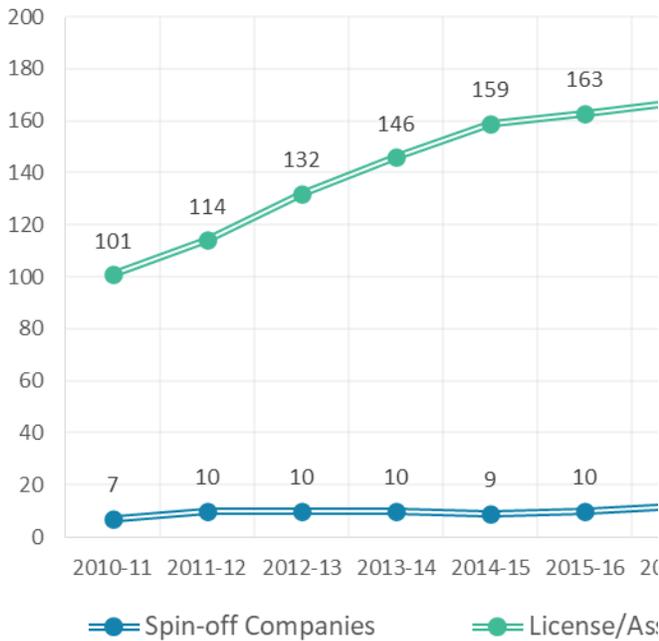


Figure 12 shows all licensing/assignment agreements and spin-off companies for PHSA Overall, combined for the past 12 years. Data is collected from PHSA's Technology Development Office (TDO) and through UBC's University-

Industry Liaison Office (UILO) which includes activities from BCCHR and BCCRI researchers. Program specific numbers can be found in the BCCRI and BCCHR program sections. One spin-off was created: Amphorax (BCCRI).

FIGURE 12 License/Assignment Agreements and Spin-Off Companies by Fiscal Year

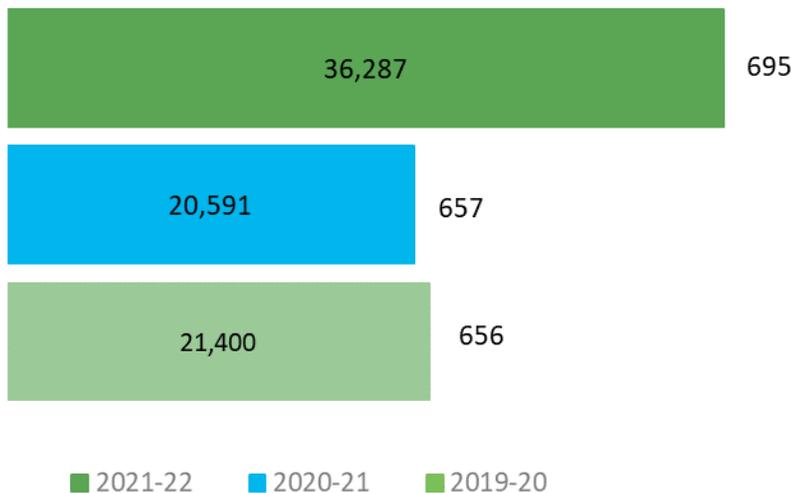


For FY 2021-22, the number of clinical trials increased by 5.8% (38) over FY 2020-21. See Figure 13 for number of Clinical Trials and Total Cumulative Subject Enrollment by Fiscal Year.

to participate in clinical evaluation of new drugs, many of which achieve therapeutic benefits beyond those offered by standard of care treatment. Clinical trials also represent the final step in the translational research continuum, which begins with basic or discovery research, includes development of products, and culminates with the testing of those products in rigorous trials

The opportunity to participate in clinical trials is an important metric because it offers patients the opportunity

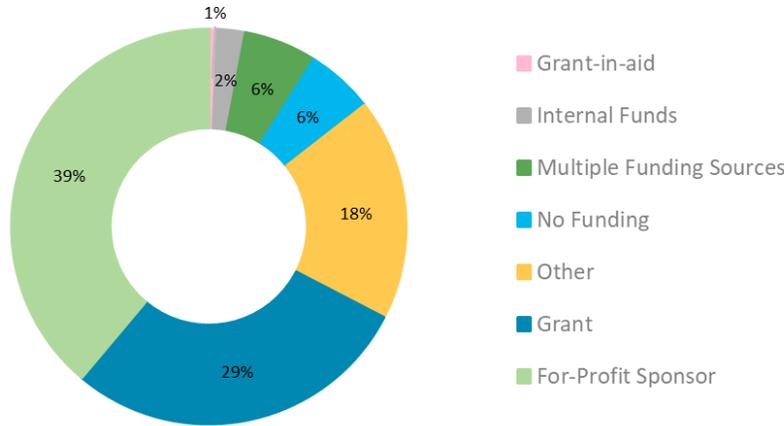
FIGURE 13 Total Cumulative Subject Enrollment and # of Clinical Trials by Fiscal Year



Grant funding type for Clinical Trials (CT) is sourced from the REB (Research Ethics Board) file and reflects the funding type entered as part of the ethics application (see Glossary – Appendix 1, page 65 for a definition of funding types). The percentage of trials that are industry sponsored (For-Profit Sponsor) was 39% in FY 2021-22, a

decrease of 3% from FY 2020-21. This is due in part from the large % increase in the Other category. The Other category includes CTs with no funding type or with funding types that cannot be classified into one of the other categories. See Figure 14 for a breakout of trials by funding type percentage by category.

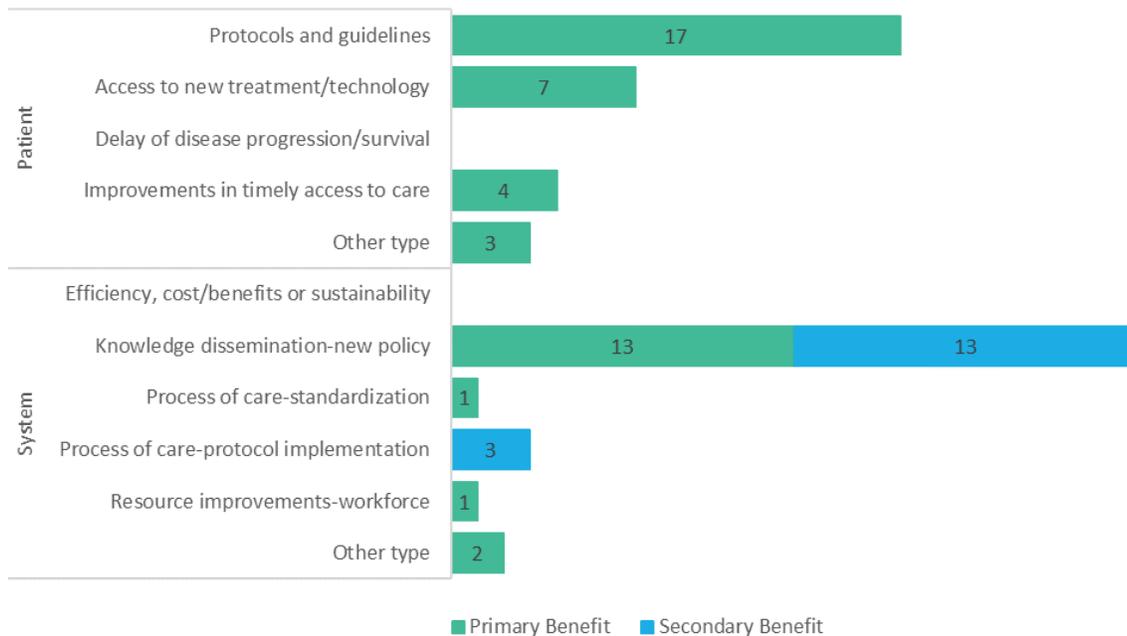
FIGURE 14 PHSA Percent of Clinical Trial Grant Funding Type – Active and Terminated Trials within the FY



In FY 2021-22, the programs completed the survey that asked respondents to identify guidelines, drugs, diagnostic agents or devices adopted or approved in FY 2021-22, and any new and adopted novel and transformational research designs or methodologies resulting from research driven by PHSA researchers or collaborative research in which PHSA researchers were key participants. Program specific outcomes can be found in the *PHSA Research and Student Education Metrics Consolidated Summary Report*. The survey was not intended to be exhaustive, but to capture the significant, top of mind advancements, and, further,

asked respondents to identify the benefits to patients, population health, and/or health system sustainability of those advancements. Figure 15 is a summary of the classification of benefits realized through research. These represent both primary and secondary benefits. The Other Patient benefits included Diagnostic Tool (1) and Province-wide Care and Consultative Support. Given that many researchers participated in research related to COVID-19, we also asked them to identify if the outcome was related to COVID-19. Of the 41 outcomes reported, 11 (27%) were related to COVID-19.

FIGURE 15 Classification of Benefits Summary for All Programs



BC CANCER RESEARCH INSTITUTE (BCCRI)



Producing and Advancing Knowledge

In FY 2021-22, researchers affiliated with BCCRI were awarded a total of \$93,970,420 in research funding which represents a 23% increase over FY 2020-21. Operating Grants (\$87,343,370) represent 92.9% of total awards. A breakdown of funding types and subtypes can be found in Figures 16.

BCCRI's portion of the Research Support Fund grant for FY 2021-22 is \$1,546,301 but is not included in total research funding or the figures below. Total Covid-19 research funding was \$1,740,209 and is included in the figure 16.

FIGURE 16 Total BCCRI Research Funding by Funding Type and Sub-type by Fiscal Year

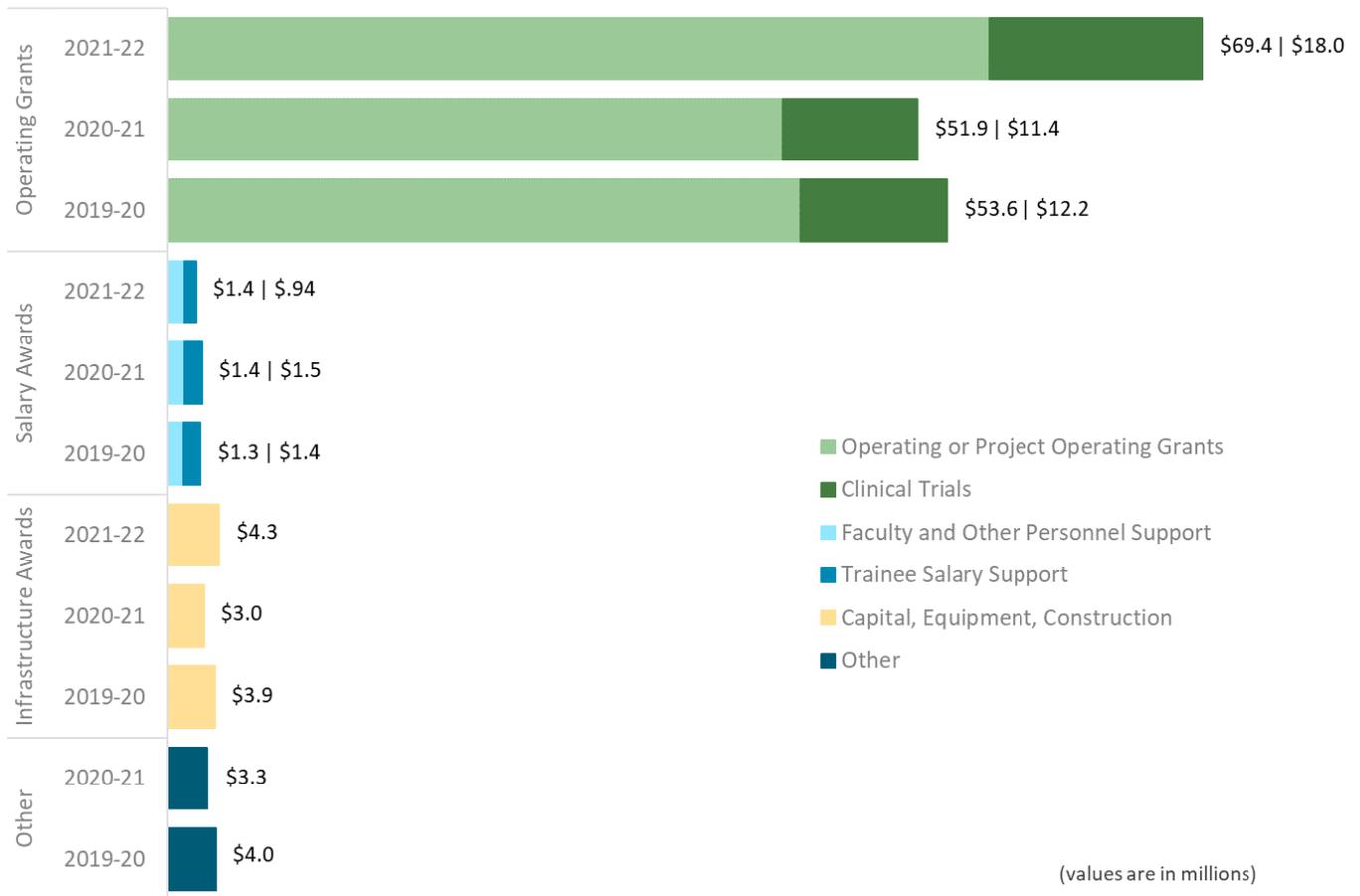
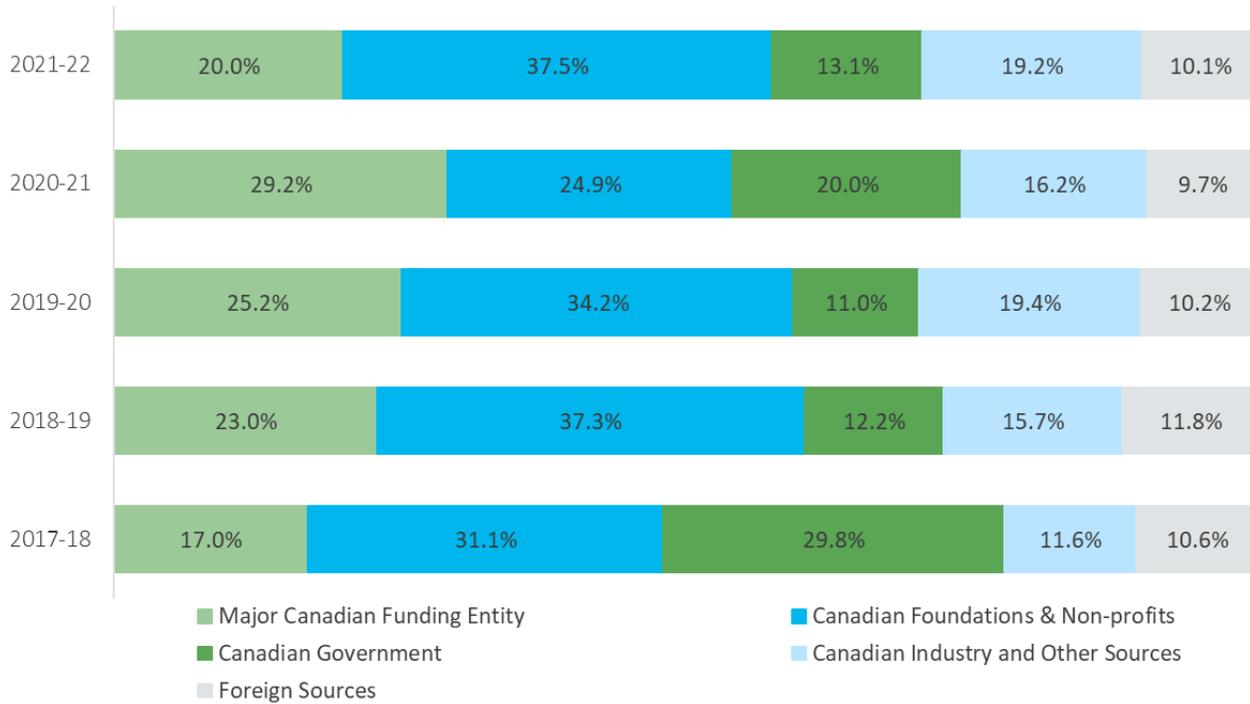


Figure 17 shows the percentage of funding by funding source category for the past 5 fiscal years. The Major Canadian Funding Entity category includes CIHR and its Institutes, Genome Canada and the Provincial Genome Agencies, Michael Smith Foundation for Health Research (MSFHR), Natural Sciences & Engineering Research Council

(NSERC), and the Social Sciences & Humanities Research Council (SSHRC). While there has been fluctuation between categories, Canadian sources of funding have remained approximately 80% of total funding, each year. Canadian Foundations & Non-profits saw the largest increase from the previous fiscal year.

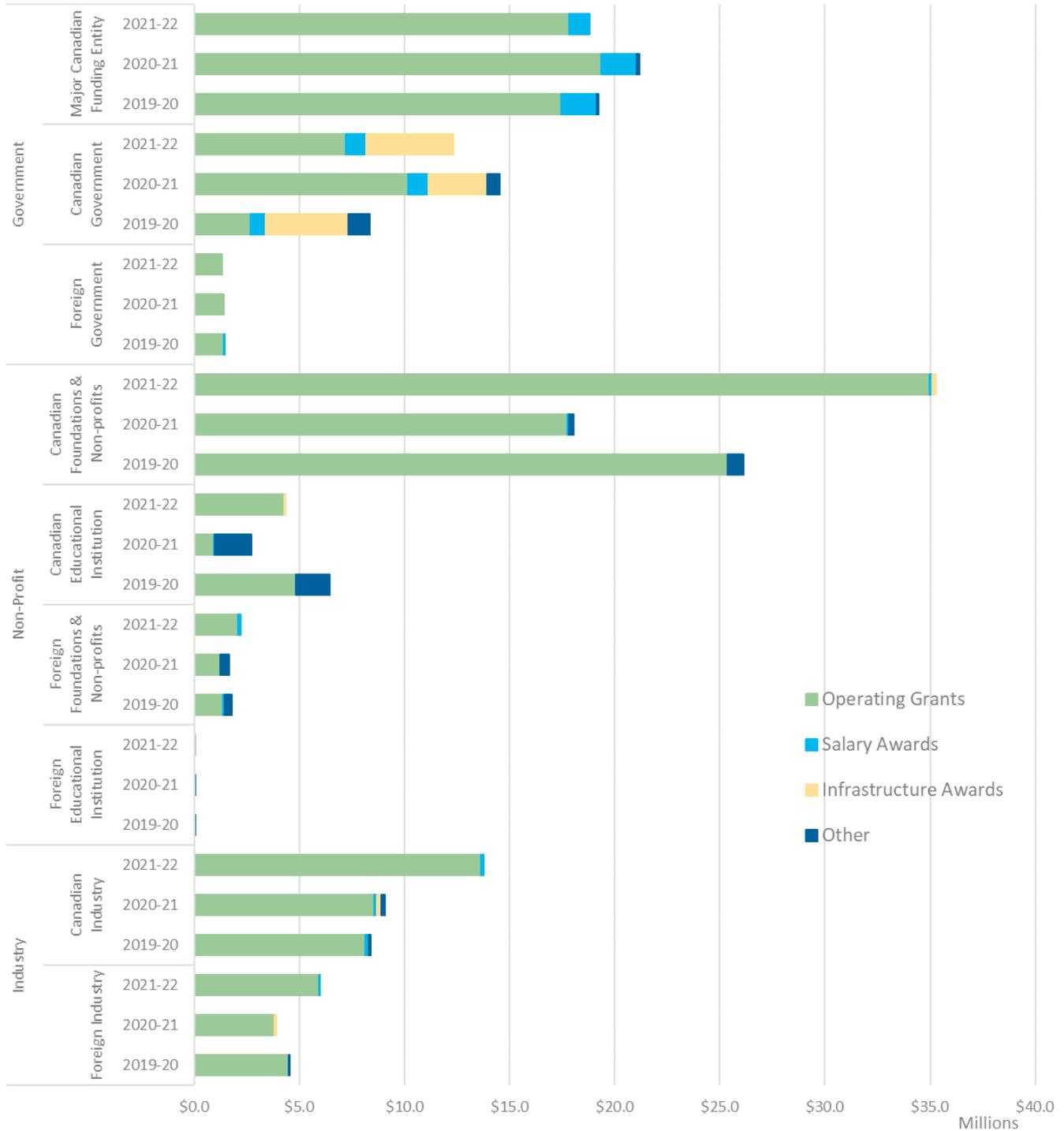
FIGURE 17 Percentage of BCCRI Research Funding by Funding Source Category by Fiscal Year



BCCRI's Total Award Funding is shown by RISE sector, Funding Source Category and Funding Type. In FY 2021-22, the top funding sources are, Canadian Foundations & Non-profits (37.5%), Major Canadian Funding Entities (20%),

and Canadian Industry (14.7%). Figure 18 details the funding categories by RISE sector, funding source category and funding type.

FIGURE 18 BCCRI Research Funding by RISE Sector, Funding Source Category and Type by Fiscal Year



The application success rate is reported for the Fall 2021 and Spring 2022 CIHR grant competitions. Results (see table

4) are shown for National and BCCRI. BCCRI was successful in the Project Grant competitions for a total of 14 awards.

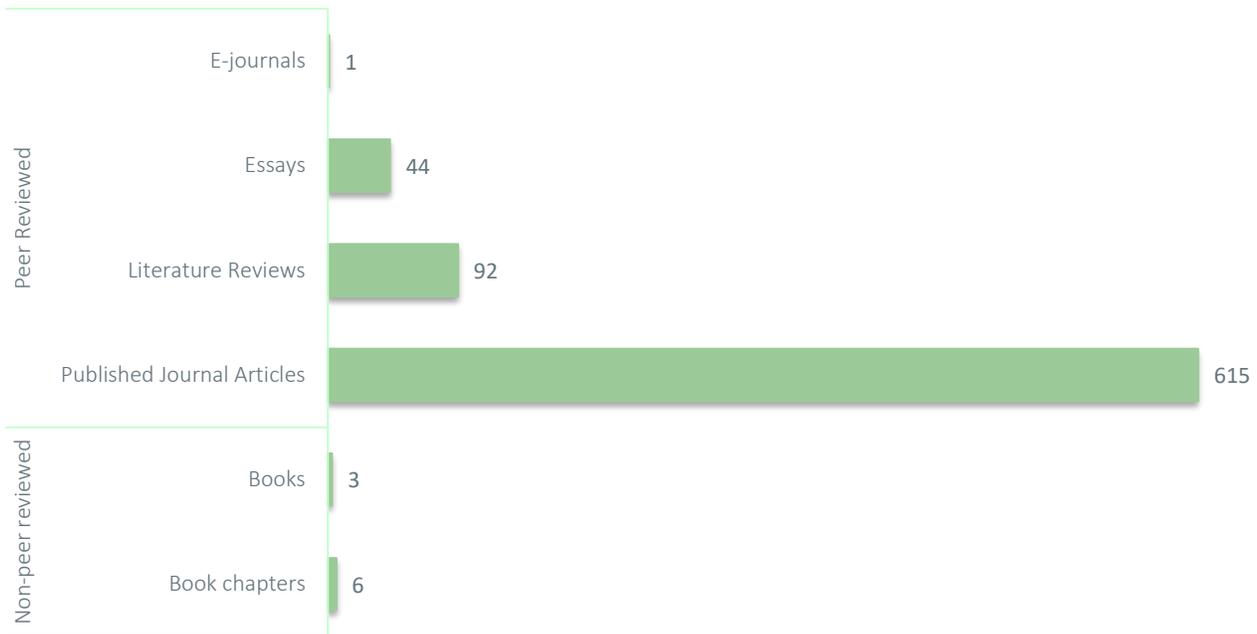
TABLE 4 BCCRI Annual Grant Application Success Rate

Grant Funding Opportunity	National Overall Results % (Approved/Submitted)	BCCRI Results % (Approved/Submitted)
2021-09 Project Grant	26.0% (523/2,014)	20.0% (6/30)
2022-03 Project Grant	22.3% (468/2,095)	32.0% (8/25)

Total number of publications by type and category of peer vs. non-peer review is seen in Figure 19. BCCRI had a total

of 761 publications, with a majority (615) of published journal articles.

FIGURE 19 Total Number of BCCRI Publications by Type and Category

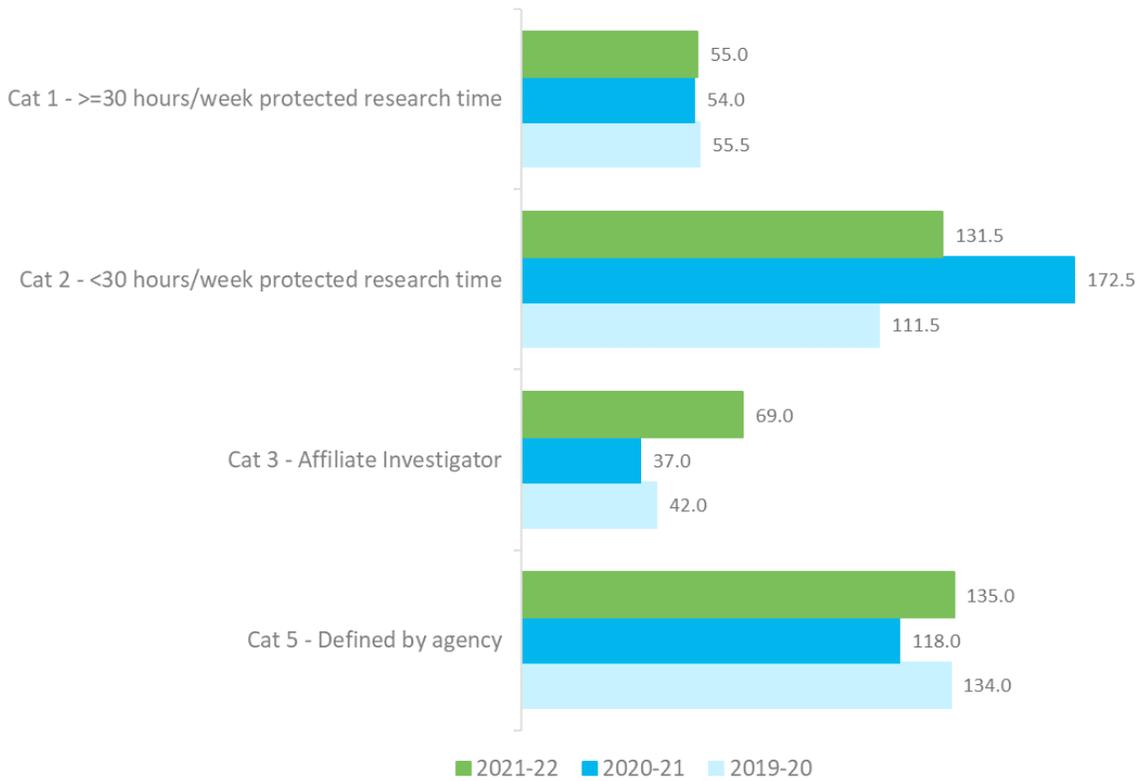


Building Research Capacity

BCCRI has a total of 321.5 researchers in FY 2021-22 in categories 1, 2, and 5, a decrease of 23 from FY 2020-21. While adoption of the BCCHR category classifications is in place, a significant amount (135) of the total researchers is in Category 5, which is a program specific category used to describe researchers that do not meet BCCHR category classifications. For BCCRI, the majority of Category 5

researchers are Medical or Radiation Oncologists, Program or Practice Leaders, and Nurses. As in past year’s reports, researchers whose funding is officially split 50/50 between research entities are classified as 0.5. See Figure 20 for the number of researchers by category.

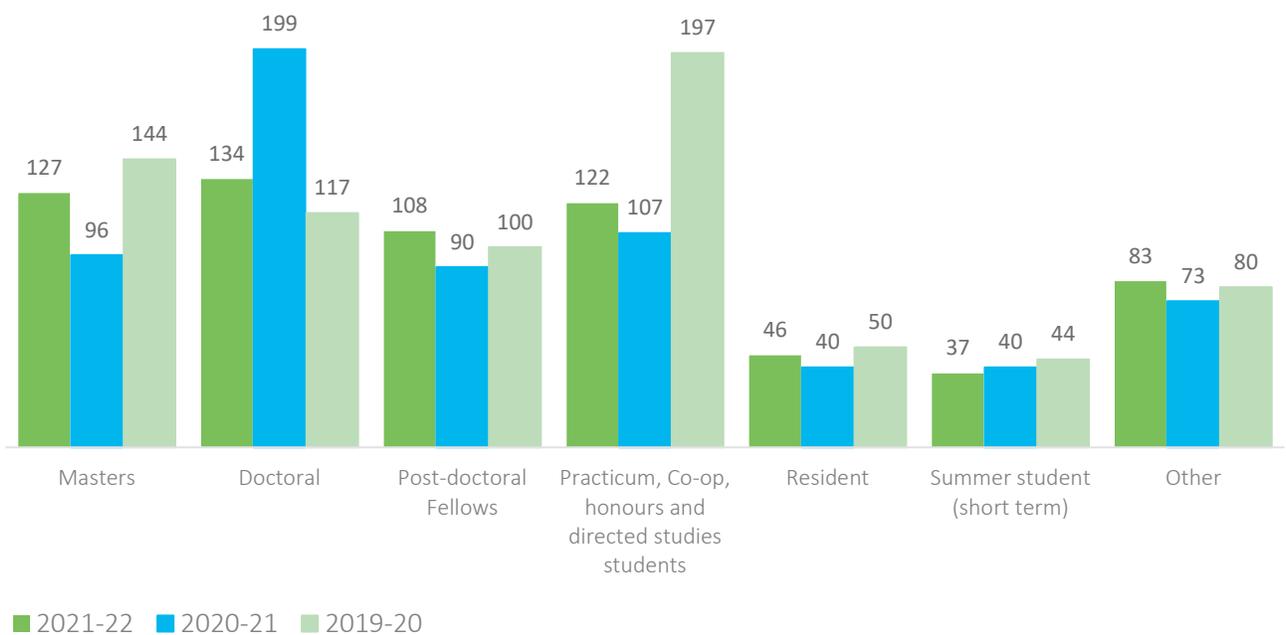
FIGURE 20 Total Number of BCCRI Researchers by Category and Fiscal Year



During FY 2021-22, BCCRI researchers provided training and supervision to a total of 657 trainees, an increase of 12 from FY 20-21. See Figure 21 for the number of trainees by type. Factors influencing the number of trainees include but

are not limited to, operating grant success rates; whether trainees can obtain fellowships to secure their own funding, and how often trainee competitions are held and the envelope of funding.

FIGURE 21 Total Number of BCCRI Trainees by Type and Fiscal Year



Achieving Economic Benefits and Innovation

Patent Activity has remained relatively stable over the last five fiscal years (see Figure 22 & 23). Invention disclosures are primarily internal BCCRI documents, filed with the Technology Development Office (TDO) to inform the decision of whether to proceed with the patent process. The next stage in the patent process is to file provisional patent applications followed by patent cooperative treaties, or PCTs, which act as a gateway to world-wide patents.

National patent applications are then filed with each step involving greater specificity. Issued patents were licensed to start-up companies Essa and Alpha 9. For patent applications the main driver was applications licensed to start ups Alpha 9 and Innovakine.

FIGURE 22 BCCRI Invention Disclosures, Provisional Patent and PCT Applications by Fiscal Year

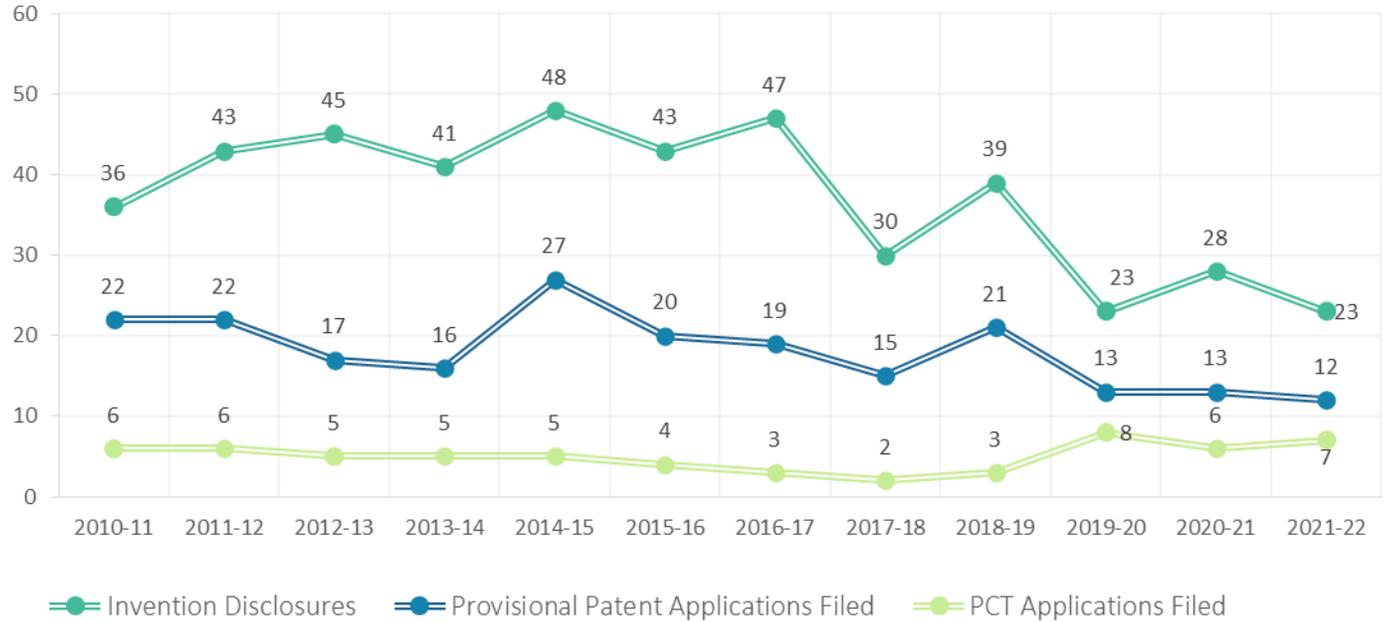
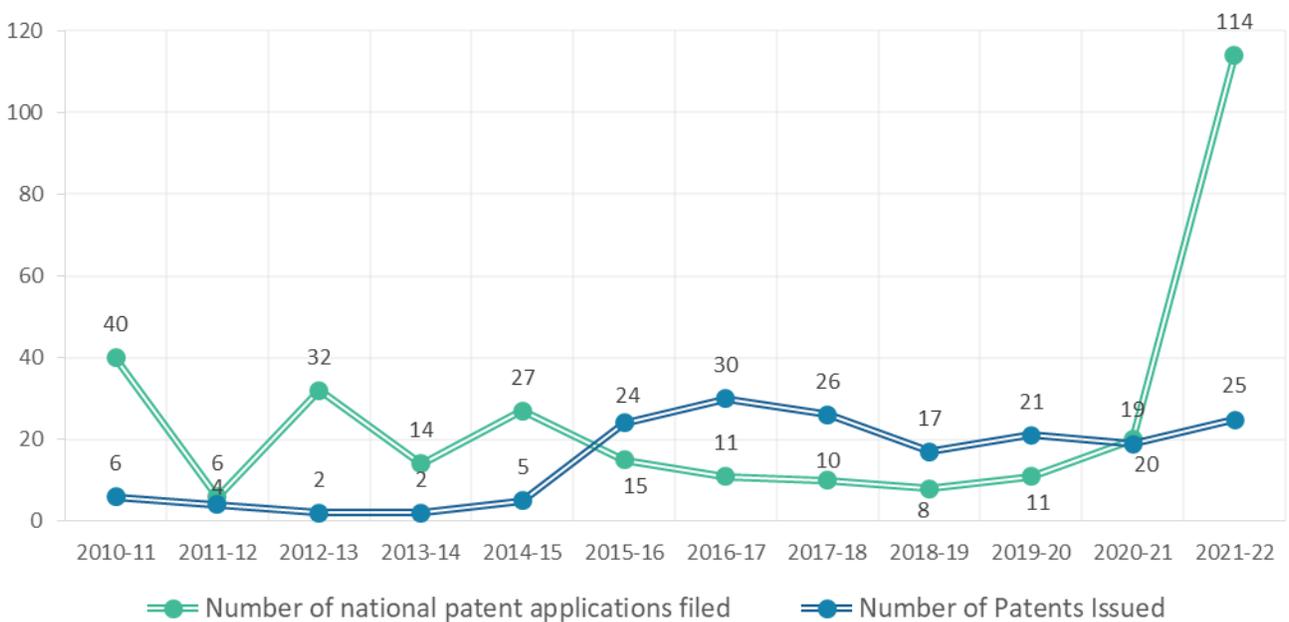


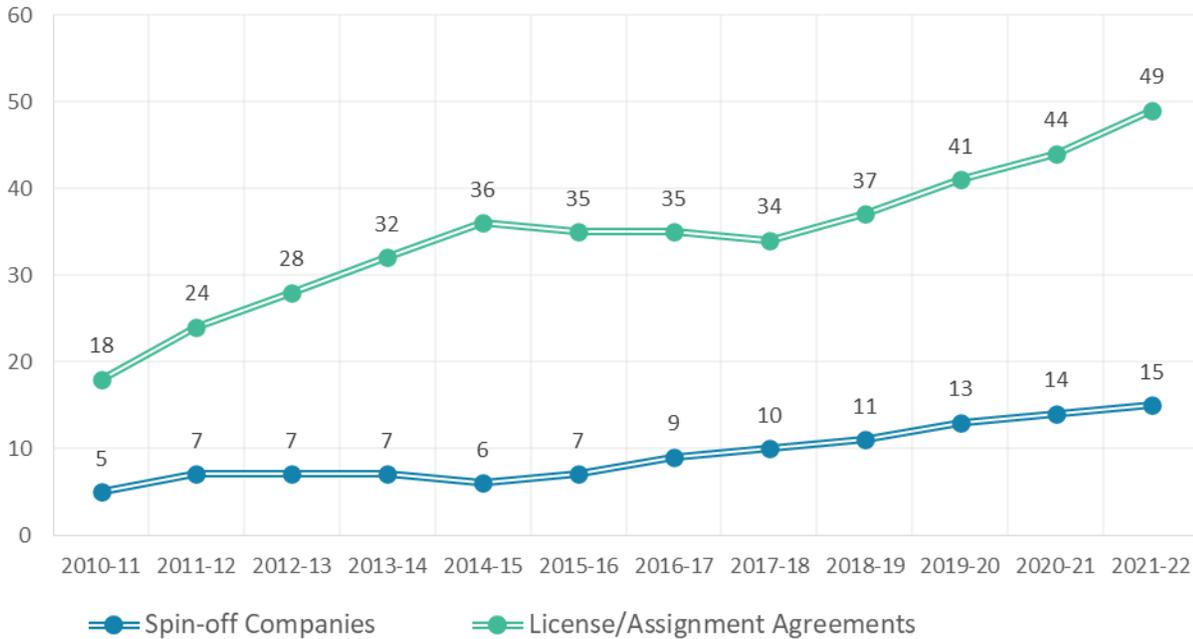
FIGURE 23 BCCRI National Patent Activity by Fiscal Year



In FY 2021-22, there were 49 active license agreements (see Figure 24), including seven (7) new licenses/assignment agreements. There was one (1) new spin-off company created. Amphorax Life Sciences: The missions of this company is the rapid development of antimicrobial peptides (AMPs) as alternatives to conventional small molecule antibiotics. They are targeting urgent global risks

including antimicrobial resistance and the COVID-19 coronavirus. Other active spin-off companies include Alpha9 Theranostics, Innovakine Therapeutics Inc., Aquinox Pharma, Essa Pharmaceuticals, Repeat Diagnostics, Coastal Genomics, Logipath Medical, Qing Bile Therapeutics, Metera Pharma, Curvafix, Cuprous, Fusion Genomics, ARTMS Products, and Vita.

FIGURE 24 BCCRI License Agreements and Spin-Off Companies by Fiscal Year



IP related revenue, in accordance with UBC (University Industry Liaison Office UILO) definitions (see Glossary – Appendix 1, page 61) is reported in Table 5. Expenses related to patenting, license IP and legal costs totaled \$497,271.54 in FY 2021-22. Realized licensing revenue per the distribution agreements totals \$2,210,216 with

\$1,939,230 to PHSA and \$270,985 to BC Cancer departments. While distribution agreements vary, typically the inventor receives 50% of the net licensing revenue, with the remainder split between PHSA, BC Cancer departments, and UBC for those researchers with a UBC affiliation.

TABLE 5 TDO IP Related Revenue

IP RELATED REVENUE	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Royalties	\$410,845.30	\$637,718.79	\$729,984.18	\$1,701,269.06	\$1,136,802.24
Equity Liquidated	\$303,880.54	\$122,861.33	\$31,375.94	\$123,470.15	\$1,722,742.51
License Fees	\$113,517.95	\$251,513.80	\$302,783.22	\$956,452.72	\$90,371.75
License Management	\$154,190.87	\$112,066.91	\$134,207.37	\$217,182.20	\$214,581.56
Option Fees	0	0	0	0	0
GROSS LICENSING REVENUE (TOTAL)	\$982,434.66	1,127,160.83	\$1,198,350.71	\$2,998,374.13	\$2,949,916.50

Advancing Health and Policy Benefits

See Table 6 for a detailed breakdown of clinical trial activity by fiscal year. The percentage of BCCRI trials that had no enrollment figures was 8.2% in FY 2021-22.

TABLE 6 BCCRI Clinical Trials

Fiscal Year	16-17	17-18	18-19	19-20	20-21	21-22
Total Number of Clinical Trials active during the FY	321	309	337	370	362	388
Status of the Trial at the end of the FY:						
Total Number of Active Trials	265	257	277	290	290	319
Total Number of Trials that closed during the FY	56	52	60	90	72	69
Enrolment Numbers:						
Expected Local Subject Enrolment (for the term of the study)	44,305	43,064	47,366	48,768	22,566	28,556
Total Cumulative Subject enrolment at the end of the FY	30,084	34,573	34,341	8,344	6,982	7,369

Grant funding type is reported for Clinical Trials in figure 25. This information is sourced from the REB file and reflects the funding type entered as part of the ethics application (see Glossary – Appendix 1, page 65 for a definition of

funding types). This information can be used to trend the percentage of trials that are industry sponsored. Fifty-one percent (51%) of BCCRI Clinical Trials are Industry funded.

FIGURE 25 BCCRI Percentage of Clinical Trial Grant Funding Type – Active and Terminated Trials within the FY

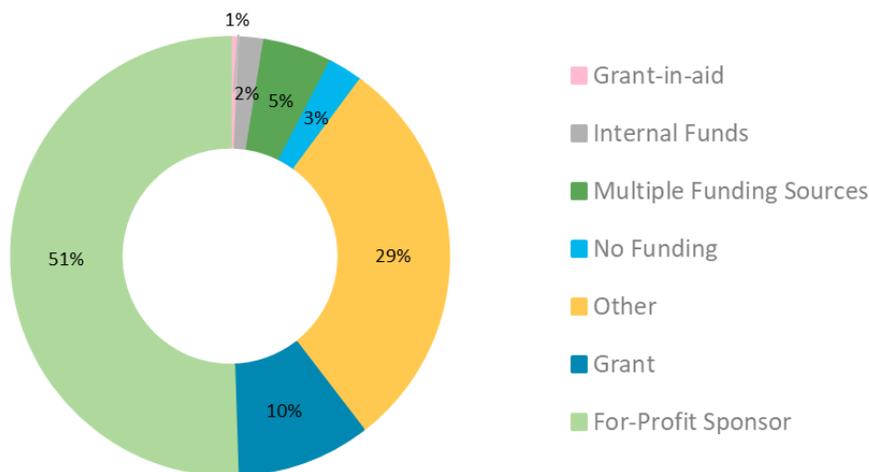


Table 7 reflects BCCRI's Top Three Achievements/Accomplishments/Highlights, and can include awards, citations, clinical programs, either in

progress or historical, and be relevant to FY 2021-22 timeframe (April 1, 2021 - March 31, 2022).

TABLE 7 BCCRI Top Three Achievements/Accomplishments/Highlights

TUMOUR SEQUENCING FOR CHANGES OF CLINICAL SIGNIFICANCE
<p>BC Cancer researchers, led by distinguished GSC scientist Dr. Aly Karsan, including members of the Karsan Lab, the Cancer Genetics and Genomics laboratory, Hereditary Cancer Program, and Departments of Pathology at BC Cancer developed a next generation sequencing test that screens tumour tissue for variants in 45 different genes. This new screening tool—referred to as the Oncology and Hereditary Cancer Program (OncoHCP) panel can identify people with increased susceptibility to cancer.</p> <p>In their study, published in the <i>Journal of Molecular Diagnostics</i>, 55 samples were screened for somatic and germline variants across 45 genes simultaneously. DNA changes in the genes targeted by the OncoHCP panel are known to be associated with six advanced cancer types and ten cancer susceptibility syndromes. The results of follow up testing showed the panel had excellent sensitivity, specificity, positive predictive value and reproducibility.</p> <p>While this new test continues to inform clinical patient management, it also identifies people at increased risk of developing cancer due to a familial predisposition. Follow-up genetic testing when clinically relevant germline variants are identified by tumour sequencing—after pretest counselling and informed consent—is potentially beneficial to both cancer patients and their family members.</p>
CAPACITY BUILDING AT SATELLITE SITES TO ENABLE REMOTE PATIENT CLINICAL TRIAL FOLLOW-UP
<p>Dr. Robert Olson, radiation oncologist and research lead at BC Cancer – Prince George, has been spearheading methods of supporting patients participating in clinical trials living in rural and remote areas around Terrace or Trail to connect with physicians closer to home for their follow-up care.</p> <p>In May 2021, Dr. Olson received one of three proof-of-concept (PoC) project awards from the Canadian Cancer Clinical Trials Network (3CTN) for Canadian cancer centres that are now working on capacity-building for satellite sites in their region. These satellite sites are small, remote clinics that do not have the capacity or the infrastructure to conduct clinical trial activities.</p> <p>Within this PoC project, work is underway to provide the satellite sites with the means to build this capacity and infrastructure. BC Cancer has been working with the hospitals in Trail and Terrace to enable them to perform follow-up visits for patients that are enrolled in the COMET-3 clinical trial. This will provide patients from these areas with a local clinic to do the 15-minute visits, instead of having to travel long distances (i.e. 6 hours one-way) to the primary BC Cancer location. Sample collection has now begun at the satellite sites, with infrastructure and capacity-building to continue through 2022.</p>
PREDICT INITIATIVE BEGINS IN B.C., AND IS SHARED NATIONALLY
<p>In May 2021, BC Cancer announced a public-private partnership with Hoffmann-La Roche Limited (Roche Canada) and the Canadian Personalized Healthcare Innovation Network (CPHIN) to create a real-world evidence (RWE) framework called PReCISION Oncology Evidence Development in Cancer Treatment (PREDiCT). In one year, PREDiCT has profiled close to 500 patients that are outside the current indications for next-generation sequencing (NGS) at BC Cancer, allowing for dynamic integration of genomic features, clinical metrics, and health economic impact.</p> <p>The PREDiCT initiative is demonstrating the possibilities of a health-care system that leverages real-world evidence and clinical trial data to provide tailored and cost-effective care options for patients. Instead of reimbursement decisions based on static evaluations of safety and efficacy, PREDiCT envisions a health-care system that generates data and evidence to help regulators and health authorities capture insights throughout a patient's entire journey. In this way, PREDiCT proposes a learning health-care system that continuously evaluates and re-evaluates evidence and decisions as new data emerges.</p> <p>While generating real-world evidence for decision-makers, PREDiCT has impacted the patient experience in a multitude of ways. From providing better understanding of their tumor biology to opening new communication channels with the health-care team, the initiative also has enabled access to clinical trials and more informed selection of systemic therapies for treatment. Dr. Dean Regier and the PREDiCT team have started to socialize the framework across Canada, including nationally at the Canadian Agency for Drugs and Technologies in Health, and with oncologists and decision makers in Ontario and BC.</p>

BC CHILDREN'S HOSPITAL RESEARCH INSTITUTE (BCCHR)



Producing and Advancing Knowledge

In FY 2021-22, researchers affiliated with BCCHR were awarded a total of \$66,842,009 in research funding, an increase of \$5,154,890 (8%) from last FY. The amounts awarded as Operating Grants (\$53,210,737) make up approximately 80% of total funding received. A breakdown of funding types and subtypes can be found in Figure 26.

BCCHR's portion of the Research Support Fund Program grant totaled \$2,186,377 for FY 2021-22 but is not included in total research funding or the figures below. Total Covid-19 related research funding was \$5,955,314 and is included in the figure 26.

FIGURE 26 Total BCCHR Research Funding by Funding Type and Sub-type by Fiscal Year

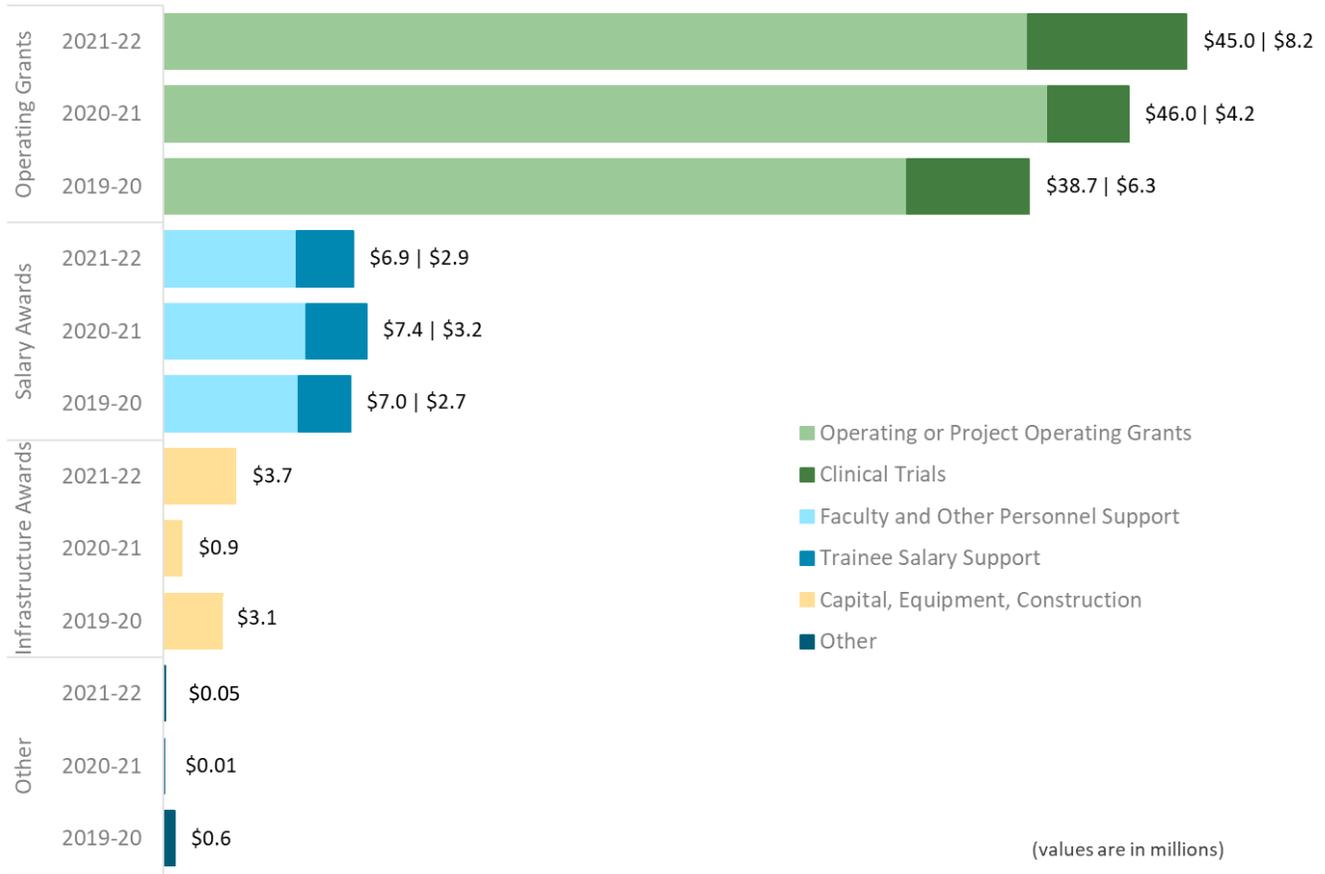
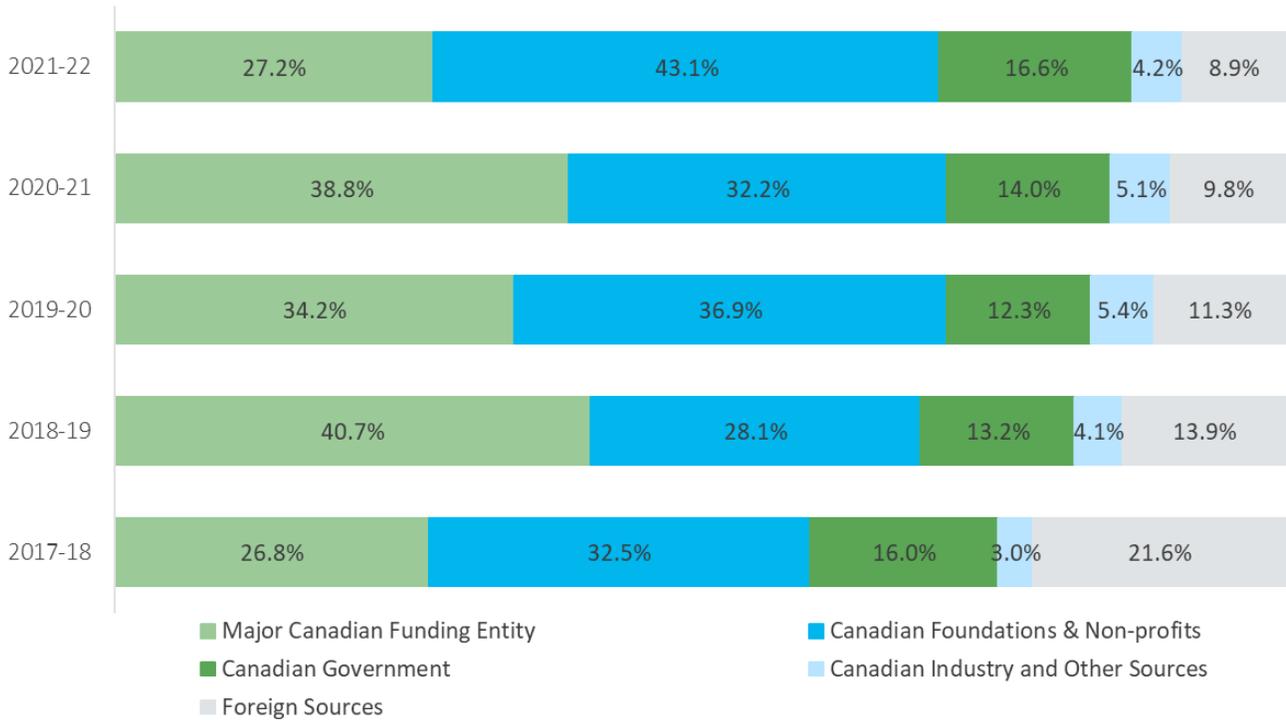


Figure 27 shows funding by funding source category. For FY 2021-22, the Canadian Foundations & Non-profit funding category showed a large increase of 10.9% with a resulting

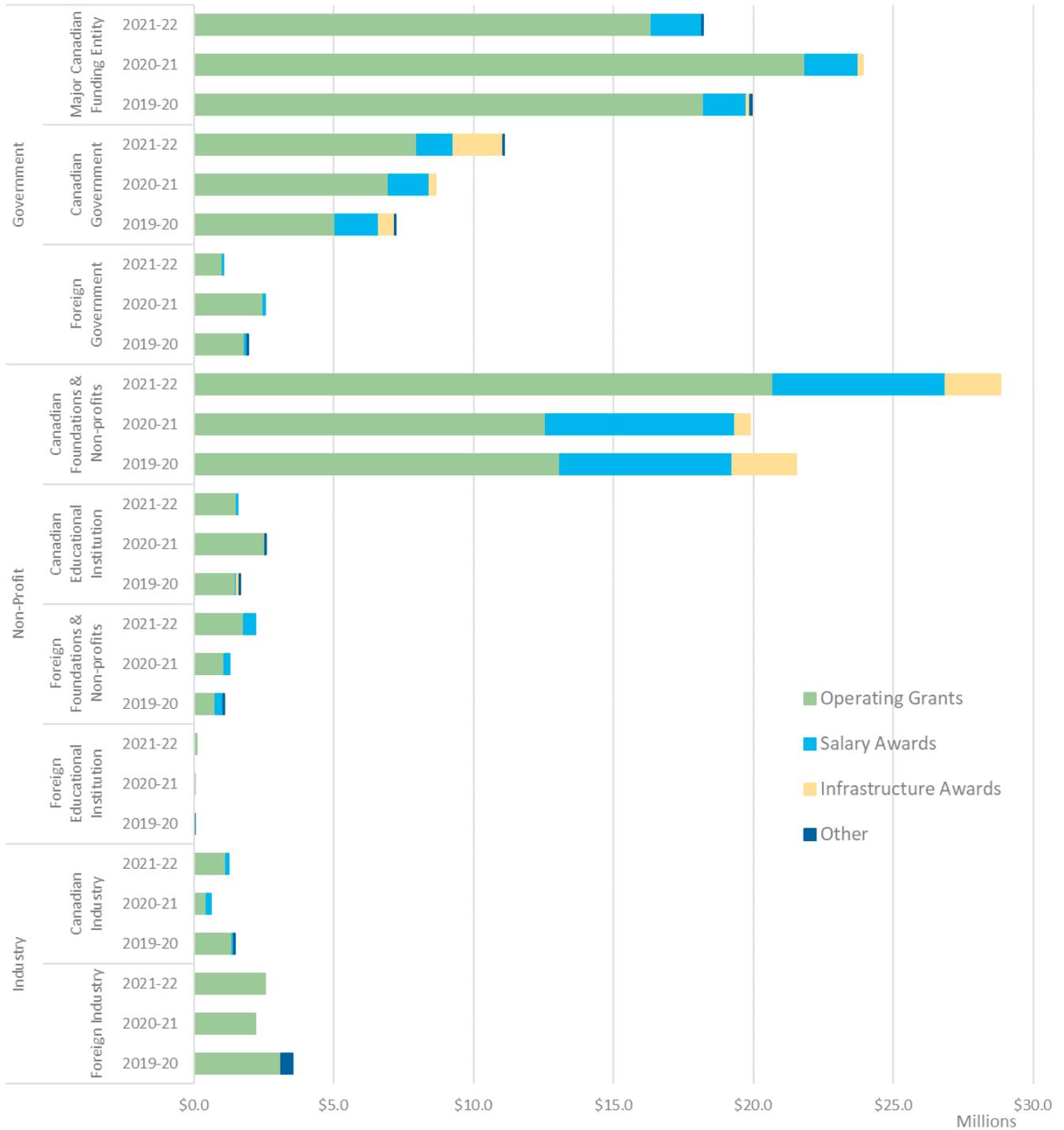
decrease of 11.6% in the Major Canadian Funding Entity category. All other categories remained stable.

FIGURE 27 Percentage of BCCHR Research Funding by Funding Source Category by Fiscal Year



The top three funding categories are Canadian Foundations & Non-Profits (43.1%), Major Canadian Funding Entity (27.2%), and Canadian Government (16.6%). Figure 28 details the funding categories by RISE sector, funding source category and funding type.

FIGURE 28 BCCHR Research Funding by RISE Sector, Funding Source Category and Type by Fiscal Year



The application success rate is reported for the Fall 2021 and Spring 2022 CIHR grant competitions. Results (see table 8) are shown for National and BCCHR. BCCHR was

successful in the Project Grant competitions for a total of 15 awards, beating the national average in the Fall Project competition.

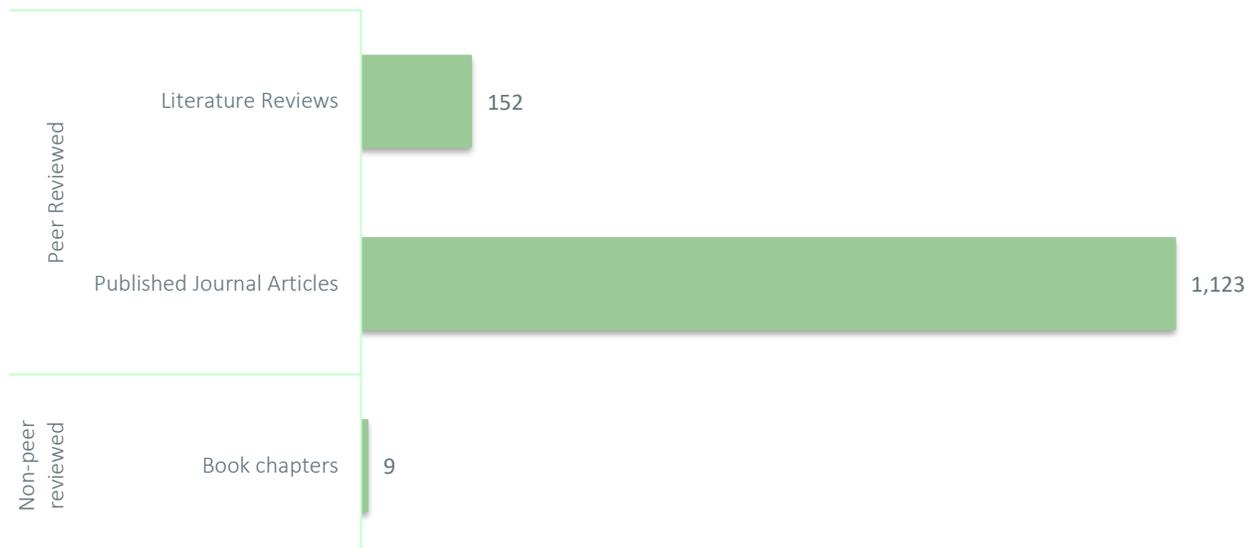
TABLE 8 BCCHR Annual Grant Application Success Rate

Grant Funding Opportunity	National Overall Results % (Approved/Submitted)	BCCHR Results % (Approved/Submitted)
2021-09 Project Grant	26.0% (523/2,014)	40.9% (9/22)
2022-03 Project Grant	22.3% (468/2,095)	20.7% (6/29)

BCCHR had 1,284 publications in calendar year 2021, with 99% of them being peer reviewed. Total number of publications by type and category of peer vs. non-peer reviewed, is seen in Figure 29. Peer review represents the gold standard for scientific credibility. The program total

represents the number of publications where at least one program researcher was an author of the publication. When researchers from more than one research entity/program collaborate on the same publication, it is counted once for each program.

FIGURE 29 Total Number of BCCHR Publications by Type and Category



Three full fiscal years' worth of data is provided for the BCCHR four research specific social media channels in Table 9; Facebook (member since July 2011); Twitter (member since March 2009); Instagram (member since January 2018); and LinkedIn (member since 2015). Tracking and reporting of this data is a measure of knowledge translation in addition to meeting the following goals with regard to BCCHR research activities:

- To increase online visibility of and traffic to BCCHR website
- To have our audience complete a specific ask, such as sign up for our newsletter, request information about a study, donate to research

- To further disseminate the knowledge that's produced here to the public, to our own PIs and trainees, and to our colleagues at BCCHF, BCCH and PHSA
- To engage and connect internal audiences including researchers and students

These metrics are a measure of reach and engagement and provide an indication of the volume of activity. Of note is that data for FY 2021-22 is now being sourced from Hootsuite Analytics. In addition to the below activity, many BCCHR researchers maintain their own professional accounts to engage peers, funders, and patients, but this information is not tracked.

TABLE 9 BCCHR Social Media Statistics

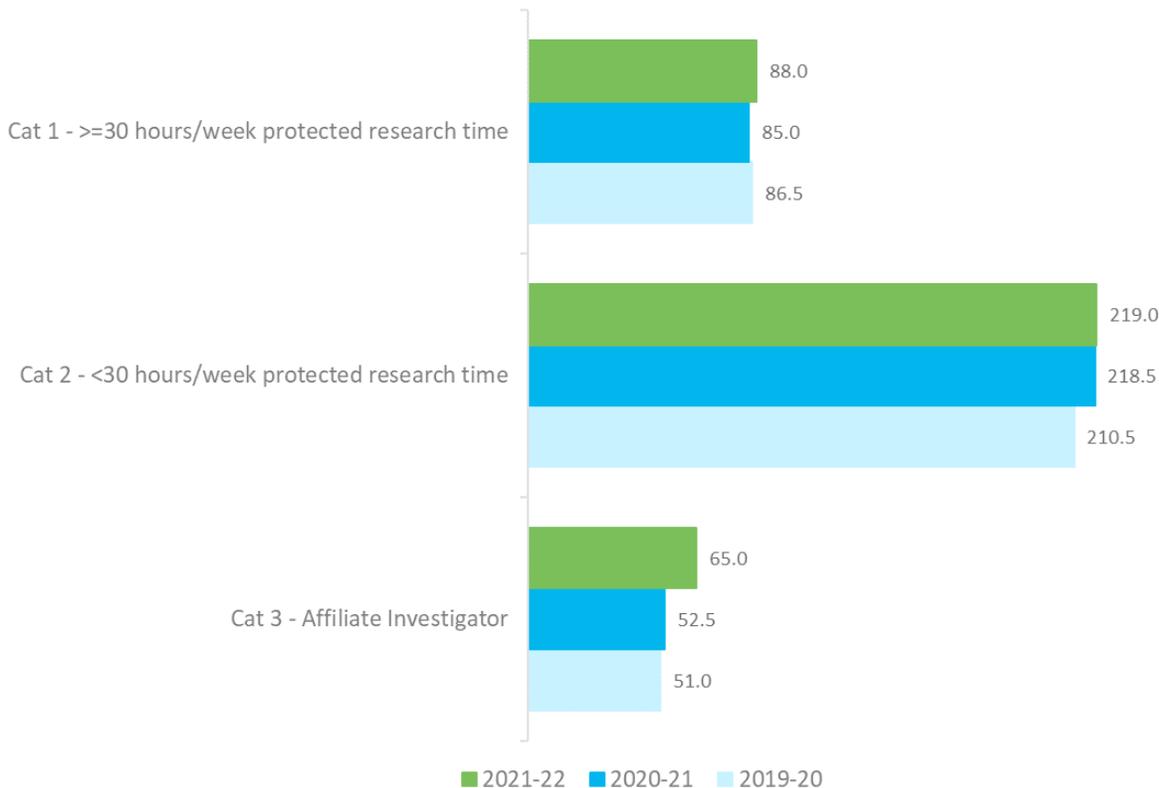
Social Media Channel		Followers			Activity Rate			
		# of followers	# of new followers	% change	# of likes	% change	# of shares	% change
Twitter	FY 2021-22	4,900	808	15%	3,700	-5%	959	-11%
	FY 2020-21	4,154	825	25%	3,871	-32%	1,069	-34%
	FY 2019-20	3,329	924	38%	5,676	34%	1,619	8%
LinkedIn	FY 2021-22	4,500	NA	NA	3,200	2%	196	21%
	FY 2020-21	3,372	557	68%	3,128	21%	155	80%
	FY 2019-20	2,011	705	54%	2,586	143%	86	21%
Facebook	FY 2021-22	2,300	170	6%	NA	NA	156	-209%
	FY 2020-21	2,166	360	68%	4,663	-39%	482	-43%
	FY 2019-20	1,806	581	47%	7,641	96%	850	80%
Instagram	FY 2021-22	2,800	928	10%	7,200	-55%	NA	NA
	FY 2020-21	2,507	889	55%	11,139	116%	NA	NA
	FY 2019-20	1,618	1,138	237%	9,641	525%	NA	NA

Building Research Capacity

BCCHR has a total of 307 researchers in categories 1 and 2, an increase of 3.5 of FY 2020-21. The distribution of these researchers is represented in Figure 30. Researchers in categories 1 and 2 are primarily based on the Children’s & Women’s Health Centre of BC campus with the largest proportion of the members being split between Category 1 – those that have greater than 30 hours per week of their time protected for research and Category 2 – those that have less than 30 hours per week of protected research time. Category 3 members are affiliate investigators that

are not based on site but who collaborate with BCCHR members and are affiliated with a research theme. Their primary affiliation will be with another academic and/or research institution. The purpose of this category is to provide official recognition for these individuals who collaborate with BCCHR members on a regular basis. The BCCHR does not track category 3 members funding, publications, or trainees. These numbers exclude Emeritus/Emerita Investigators who have prior status as investigators with BCCHR.

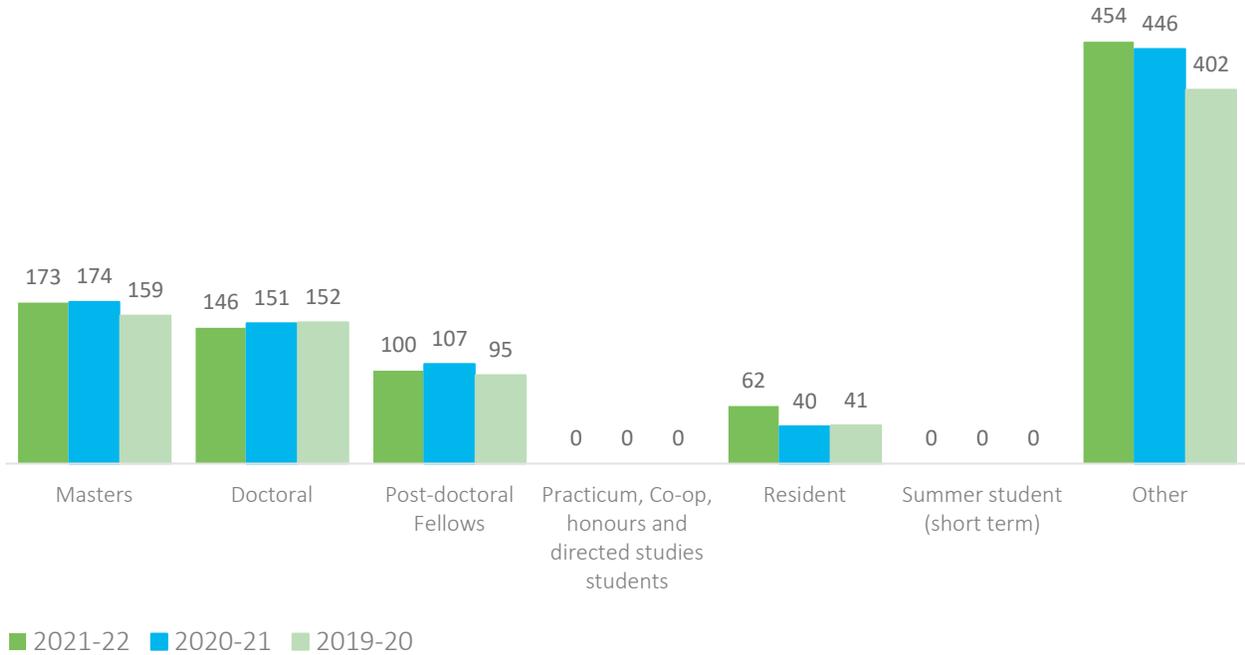
FIGURE 30 Total Number of BCCHR Researchers by Category



During FY 2021-22, BCCHR researchers provided training and supervision to a total of 935 (up 17 from FY 2020-21) trainees. The Other category is large due to the tracking of Practicum, Co-op, honours and directed studies students in addition to summer students in one combined category,

without the ability to differentiate type. See Figure 31 for number of trainees by type. BCCHR currently tracks full-time research trainees (masters, doctoral and postdoctoral fellows) and undergraduate students undertaking their training at BCCHR.

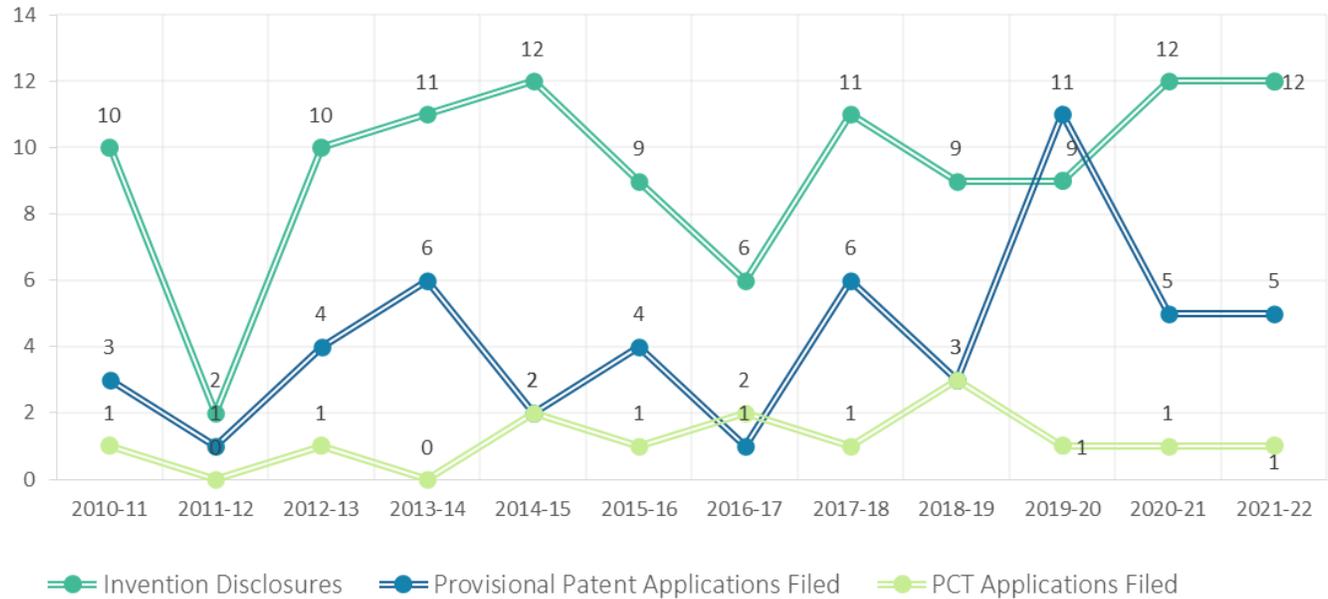
FIGURE 31 Total Number of BCCHR Trainees by Type



Achieving Economic Benefits of Innovation

The number of invention disclosures, provisional patent and PCT applications filed by fiscal year are shown in Figure 32

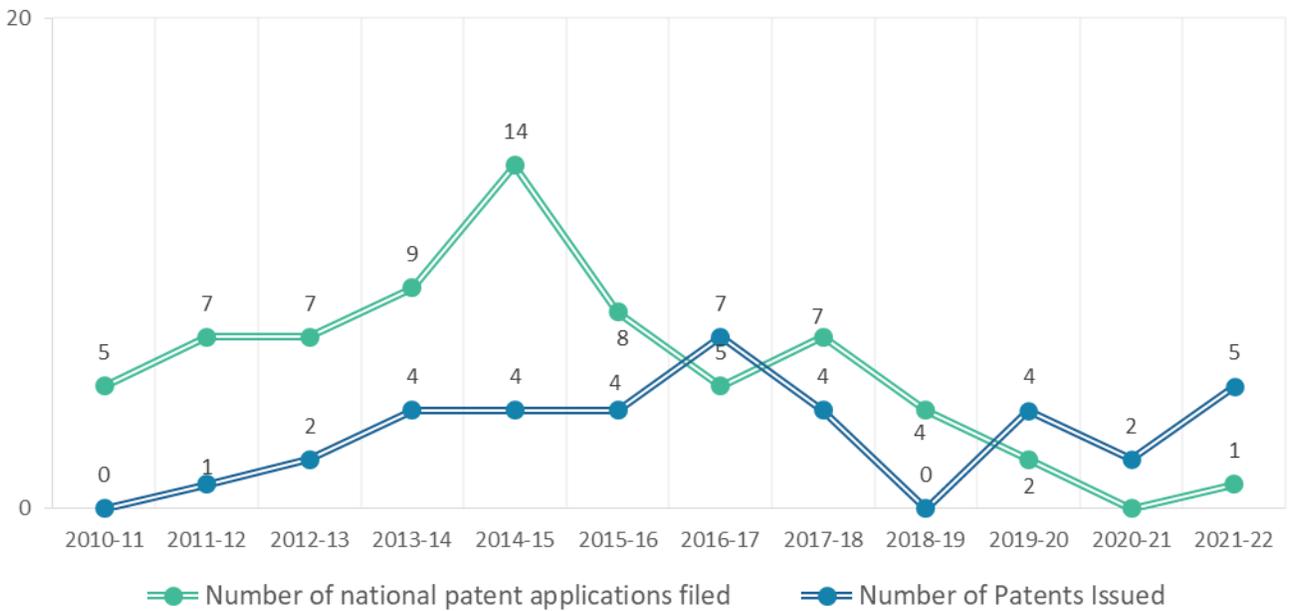
FIGURE 32 BCCHR Invention Disclosures, Provisional Patent and PCT Applications Filed by Fiscal Year



Patents are reported in Figure 33 below. Applications filed in a given year represent different applications than those which are approved in that same year (which typically are the result of applications in previous years).

Data is collected and reported by the University of British Columbia University-Industry Liaison Office (UILO).

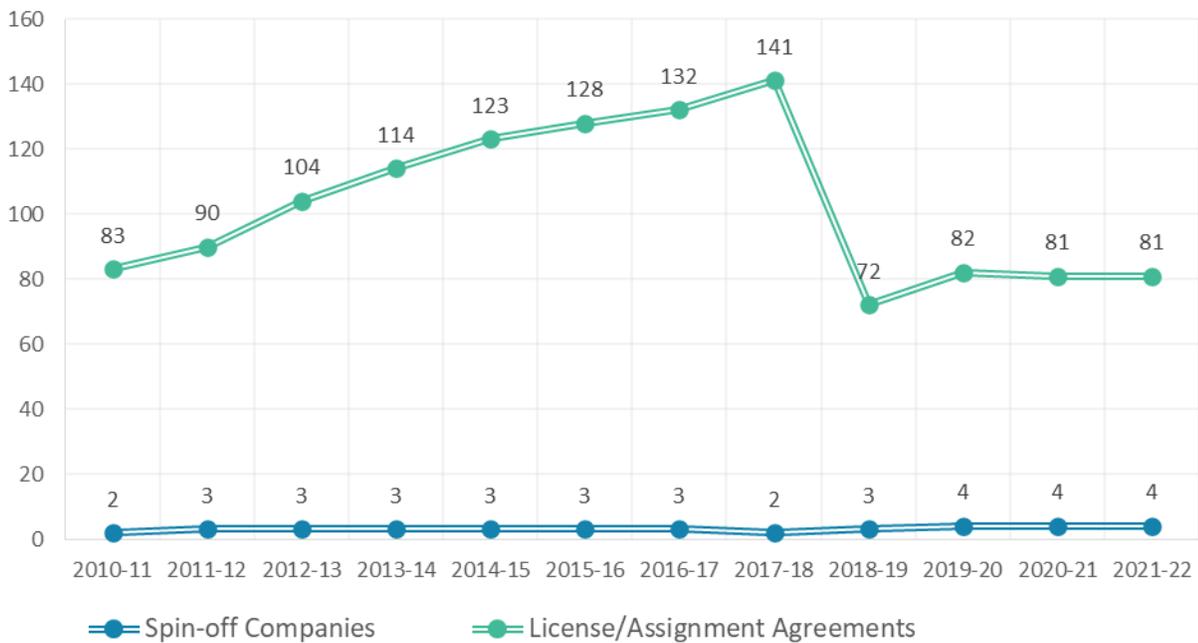
FIGURE 33 BCCHR National Patent Activity by Fiscal Year



In FY 2021-22 there were 81 active license/assignment agreements in place (See Figure 34). No new spin-off companies were created in FY 2021-22. BCCHR holds shares in: Incisive Genetics, Lions Gate Technologies, ME

Therapeutics, and Xenon Pharmaceuticals (private) which is held in trust by UBC.

FIGURE 34 BCCHR License/Assignment Agreements and Spin-off Companies by Fiscal Year



IP related line-item revenue data for FY 2021-22 is shown below. Expenses related to patenting, license IP and legal costs totaled \$60,522 in FY 2021-22.

TABLE 10 BCCHR IP Related Revenue

IP RELATED REVENUE	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22
Royalties	NA	\$313,462.10	\$635,065.03	\$727,424.30	\$837,237.00
Equity Liquidated					\$331,104.00
License Fees		\$50,000.00			\$101,705.00
License Management	NA				
Option Fees					
GROSS LICENSING REVENUE (TOTAL)	NA	\$363,452.79	\$635,065.03	\$727,424.30	\$1,270,046.00

Advancing Health and Policy Benefits

See Table 11 for a detailed breakdown of clinical trial activity by fiscal year. The percentage of BCCHR trials that had no enrollment figures continued to decrease to 12.7% in FY 2021-22. The large decrease in expected local subject enrollment is due to the expiration of the CLIP (Community Level Interventions for Pre-eclampsia) Cluster Randomized Controlled Trial. The increase in cumulative subject enrollment is due to a study of pediatric SEPSIS.

TABLE 11 BCCHR Clinical Trials

Fiscal Year	16-17	17-18	18-19	19-20	20-21	21-22
Total Number of Clinical Trials active during the FY	198	195	212	200	228	240
Status of the Trial at the end of the FY:						
Total Number of Active Trials	154	153	175	153	188	189
Total Number of Trials that closed during the FY	44	42	37	47	40	51
Enrolment Numbers:						
Expected Local Subject Enrolment (for the term of the study)	106,212	102,916	108,147	104,957	110,337	21,373
Total Cumulative Subject enrolment at the end of the FY	57,789	108,720	6,564	5,632	8,855	22,016

Grant funding type is reported for Clinical Trials in Figure 35. This information is sourced from the REB (Research Ethics Board) file and reflects the funding type entered as part of the ethics application (see Glossary – Appendix 1,

page 65 for a definition of funding types). Fifty-three percent (53%) of BCCHR’s Clinical Trials are Grant funded, with 28% Industry funded.

FIGURE 35 BCCHR Percentage of Clinical Trial Grant Funding Type – Active and Terminated Trials within the FY

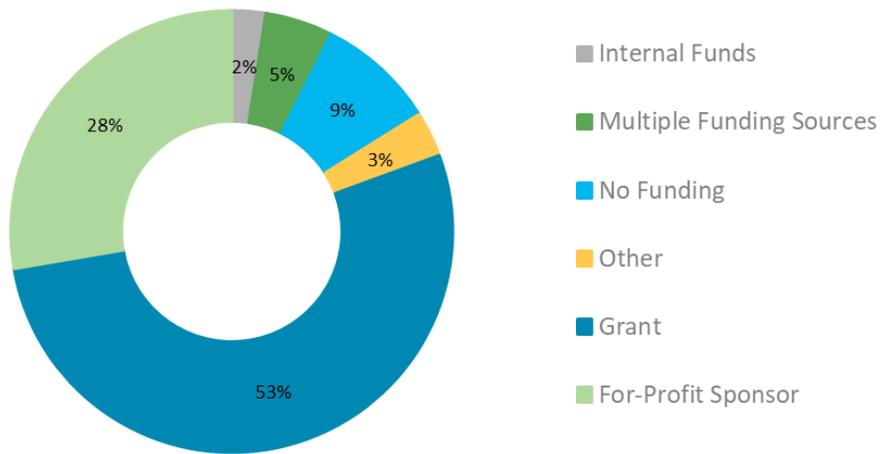


Table 12 reflects BCCHR’s Top Three Achievements/Accomplishments/Highlights, and can include awards, citations, clinical programs, either in progress or historical, and be relevant to FY 2021-22 timeframe (April 1, 2021 - March 31, 2022).

TABLE 12 BCCHR Top Three Achievements/Accomplishments/Highlights

COVID-19 AND SCHOOLS
<p>A key question early on in the pandemic was how much COVID-19 transmission was happening in schools. This kind of information was critical to determining whether it was safer to keep schools open or to close them in response to the pandemic.</p> <p>Dr. Pascal Lavoie and Dr. Louise Masse led a study to investigate the risk of COVID-19 in school settings and found that, with appropriate mitigation in place, in-person schooling presented no greater risk than community settings. The research team, which also included Dr. David Goldfarb, used sensitive blood tests to determine whether school staff in the Vancouver School District had been exposed to SARS-CoV-2, the virus that causes COVID. These results were then compared to blood donors who lived in the same communities that the staff were from.</p> <p>At the time of the study, spring 2021, only five staff of the 1,689 surveyed believed they likely acquired the virus in a school setting. This research is continuing, and researchers are studying whether this is still the case following vaccine rollout and the Omicron wave.</p>
DELAYED SECOND DOSE OF COVID-19 VACCINE LEADS TO STRONGER IMMUNE RESPONSE
<p>During the pandemic, there have been many questions around the ideal timing between the first and second doses of COVID-19 vaccine. Dr. David Goldfarb, Dr. Pascal Lavoie and Dr. Vilte Barakauskas were part of a national team that helped provide information, which showed a longer interval between doses leads to a stronger immune response.</p> <p>The researchers compared blood test results from 186 paramedics as part of the first peer-reviewed study in North America to show a stronger immune response based on timing of doses. Some of the study participants were vaccinated with an mRNA COVID-19 vaccine within the earlier recommended interval of less than four weeks, and others received their second doses after six to seven weeks. The researchers found significantly higher levels of antibodies in individuals who had longer vaccine intervals, and this was consistent regardless of which mRNA vaccine they had received.</p> <p>In a second publication, the researchers compared the neutralizing capacity of antibodies against the original SARS-CoV-2 virus, as well as variants, from matched groups of paramedics. They found that extending the vaccine dosing interval resulted in better immunogenicity against variants.</p> <p>mRNA vaccines used for this study included the Pfizer-BioNTech Comirnaty vaccine and the Moderna Spikevax vaccine. Although antibody levels are only one way to measure the body’s immune response, they play a very important role.</p>
ROBOTIC STEM CELL TECHNOLOGY
<p>New robotic stem cell research technology will be a game changer for accelerating new treatment or cures for severe and rare childhood illnesses. The equipment is housed at the BC Children’s Cellular and Regenerative Medicine Centre, co-led by investigators Dr. Glen Tibbits and Dr. Francis Lynn.</p> <p>The technology is currently being used to examine treatments for congenital heart disease, led by pediatric cardiologist and investigator Dr. Shubhayan Sanatani. Researchers are making heart tissues, and even “mini hearts” called cardioids, from a specific child’s cells so they can study irregular heart rhythms, known as arrhythmias, and test potential treatments. Currently, to find the appropriate treatment options to prevent cardiac arrest, doctors must determine through trial and error which heart arrhythmia medication combination is the right one for each individual child.</p> <p>BC Children’s investigators are also using the technology to determine whether insulin-producing beta cells could be created from stem cells to help children living with diabetes. The possibilities are vast for other conditions, such as rare diseases and cancer. Stem cells can grow into organ tissue cells that can reveal how certain diseases develop. They can also be guided into becoming specific cells that regenerate and repair tissues that have been damaged or affected by disease.</p>

BC MENTAL HEALTH & SUBSTANCE USE SERVICES RESEARCH INSTITUTE (BCMHSUS)



BC MENTAL HEALTH & SUBSTANCE USE SERVICES
Provincial Health Services Authority

Producing and Advancing Knowledge

In FY 2021-22, researchers associated with BCMHSUS, were awarded a total of \$1,249,922. Operating grants make up the majority (83%) of awards. A breakdown of funding types and subtypes can be found in Figure 36. BCMHSUS's portion of the Research Support Fund Program grant

totaled \$106,313 for FY 2021-22 but is not included in total research funding or the figures below. Total Covid-19 related research funding was \$124,005 of Operating Grants and is included in the Figure 36

FIGURE 36 BCMHSUS Research Funding by Funding Type and Sub-type by Fiscal Year

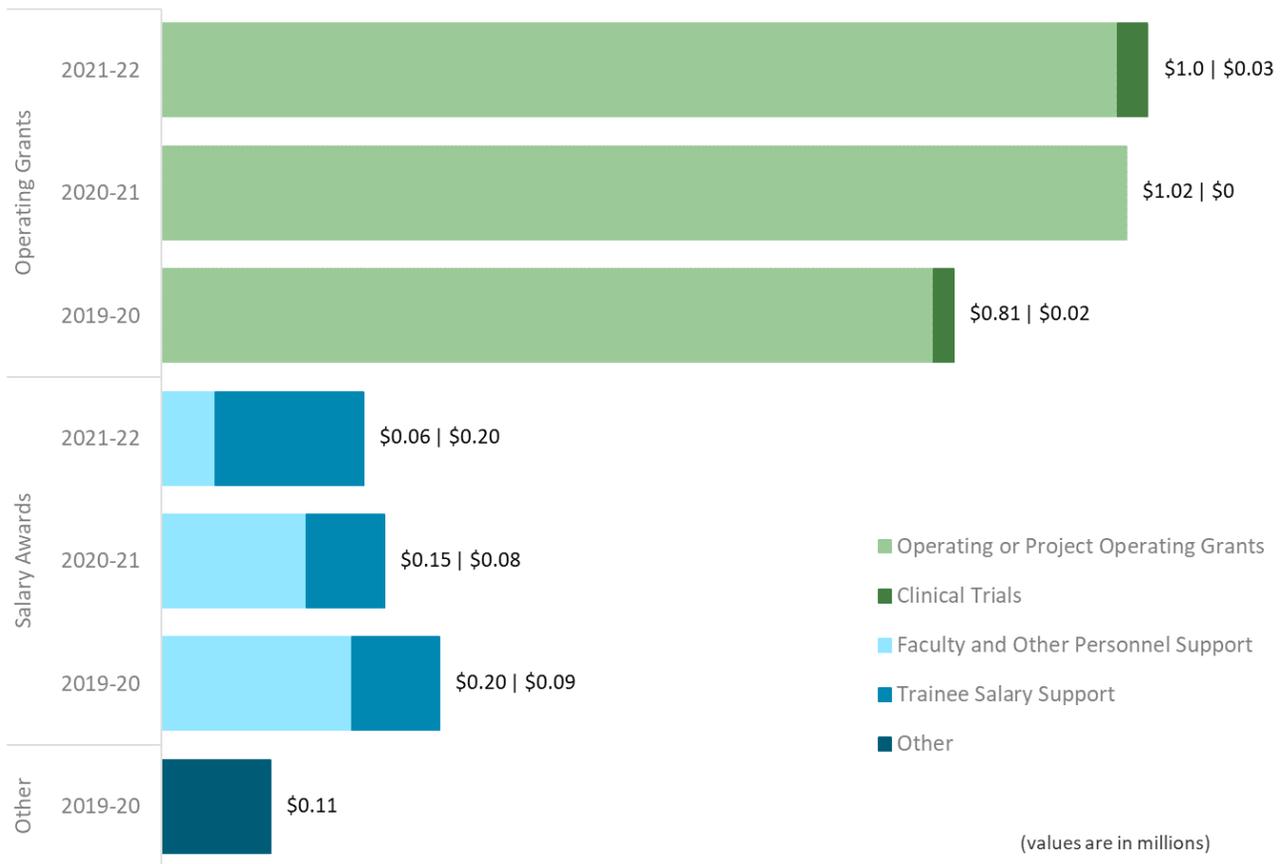
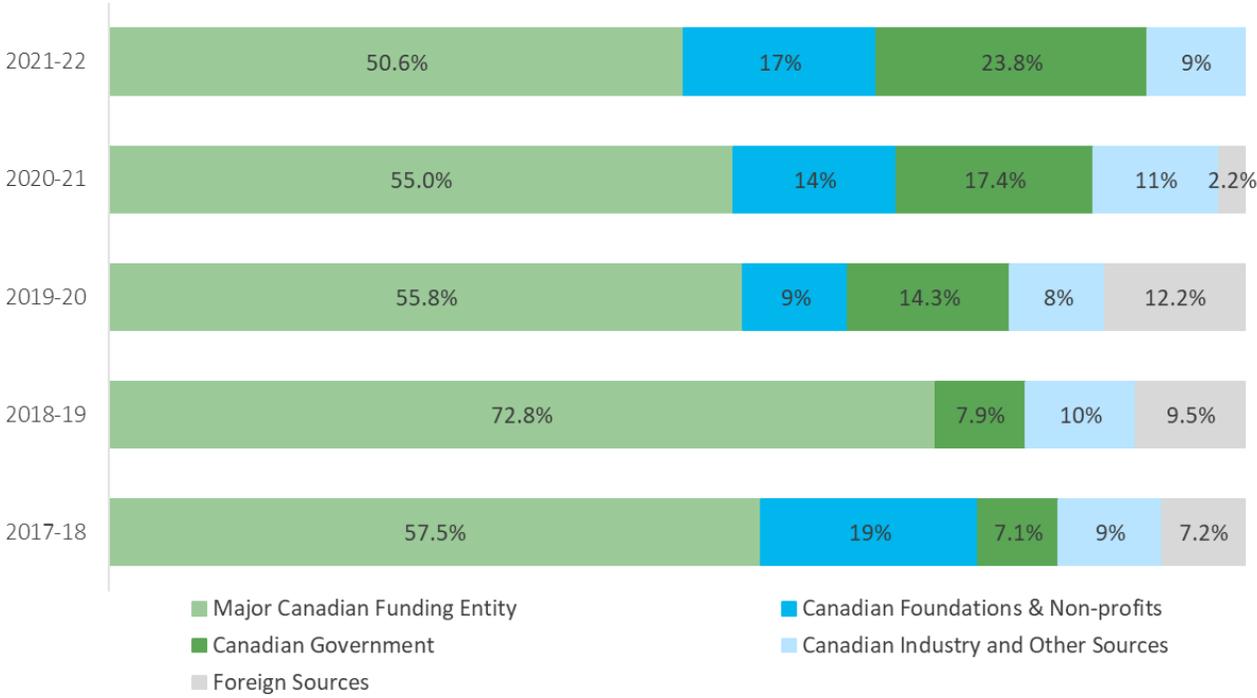


Figure 37 shows funding by funding source category. The Canadian Government category and the Canadian Foundations & Non-profits both increased over the previous fiscal year. Due to the small number of awards, the category percentages fluctuate year over year.

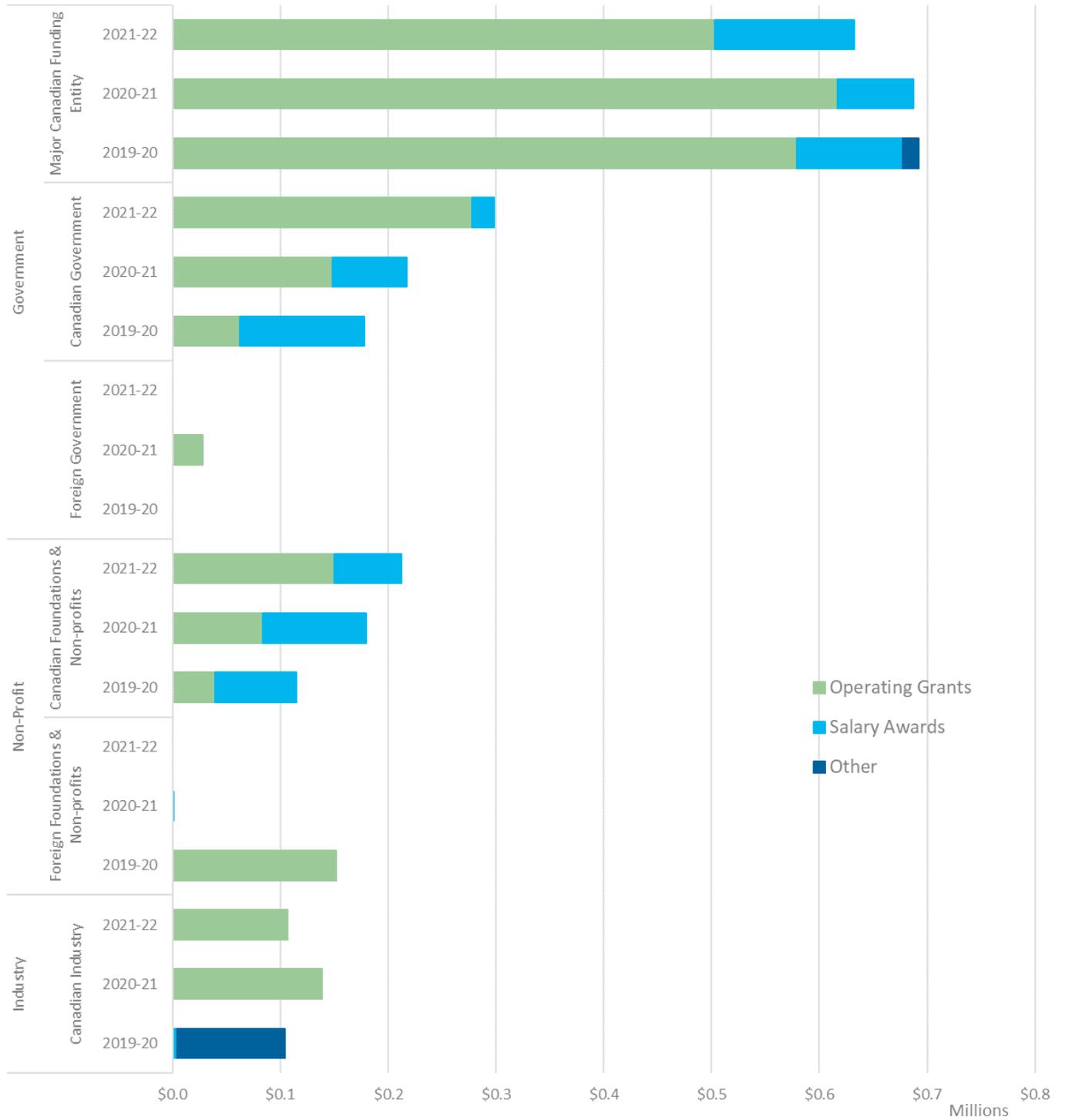
FIGURE 37 Percentage of BCMHSUS Research Funding by Funding Source Category by Fiscal Year



The top 3 funding categories are Major Canadian Funding Entities (50.6%), Canadian Government (23.8%) and Canadian Foundations & Non-profits (17%).

Figure 38 details the funding categories by RISE sector, funding source category and funding type.

FIGURE 38 Total BCMHSUS Research Funding by RISE Sector, Funding Source Category and Type by Fiscal Year



The application success rate is reported for the Fall 2021 and Spring 2022 CIHR grant competitions. BCMHSUS had no successful applications out of 17 applications. BCMHSUS

was successful in the Project Grant competitions for a total of 3 awards, beating the national average in the Spring Project competition.

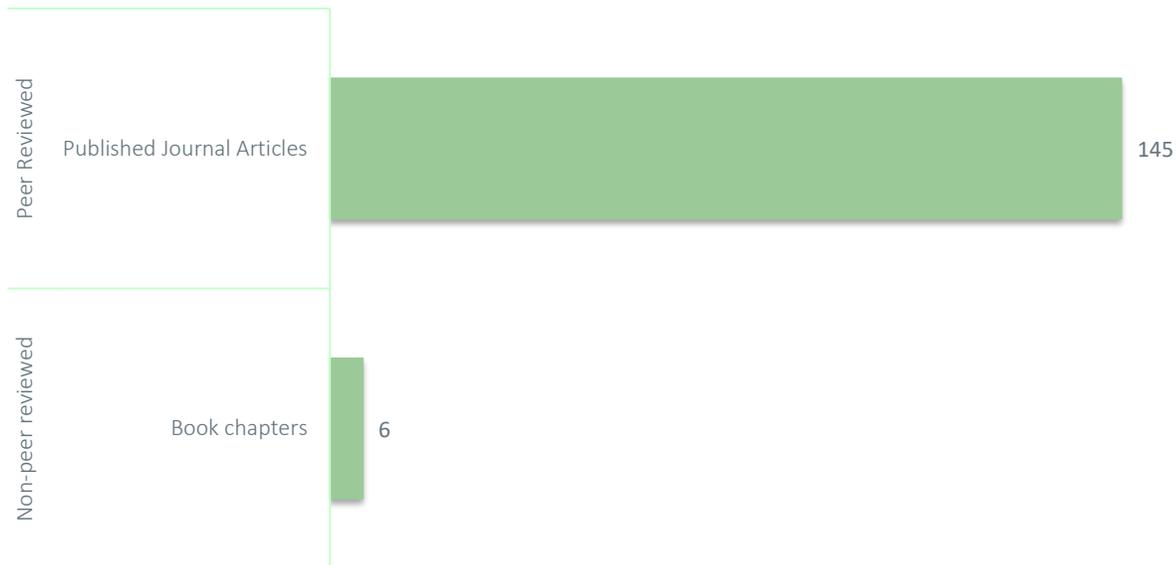
TABLE 13 BCMHSUS Annual Grant Application Success Rate

Grant Funding Opportunity	National Overall Results % (Approved/Submitted)	BCMHSUS Results % (Approved/Submitted)
2021-09 Project Grant	26.0% (523/2,014)	20.0% (1/5)
2022-03 Project Grant	22.3% (468/2,095)	40.0% (2/5)

BCMHSUS had a total of 151 publications of which 96% were peer reviewed. Total number of publications by type and category (peer vs. non-peer reviewed) is seen in Figure 39. The program total represents the number of

publications where at least one program researcher was an author of the publication. When researchers from more than one research entity/program collaborate on the same publication, it is counted once for each program.

FIGURE 39 Total Number of BCMHSUS Publications by Type and Category

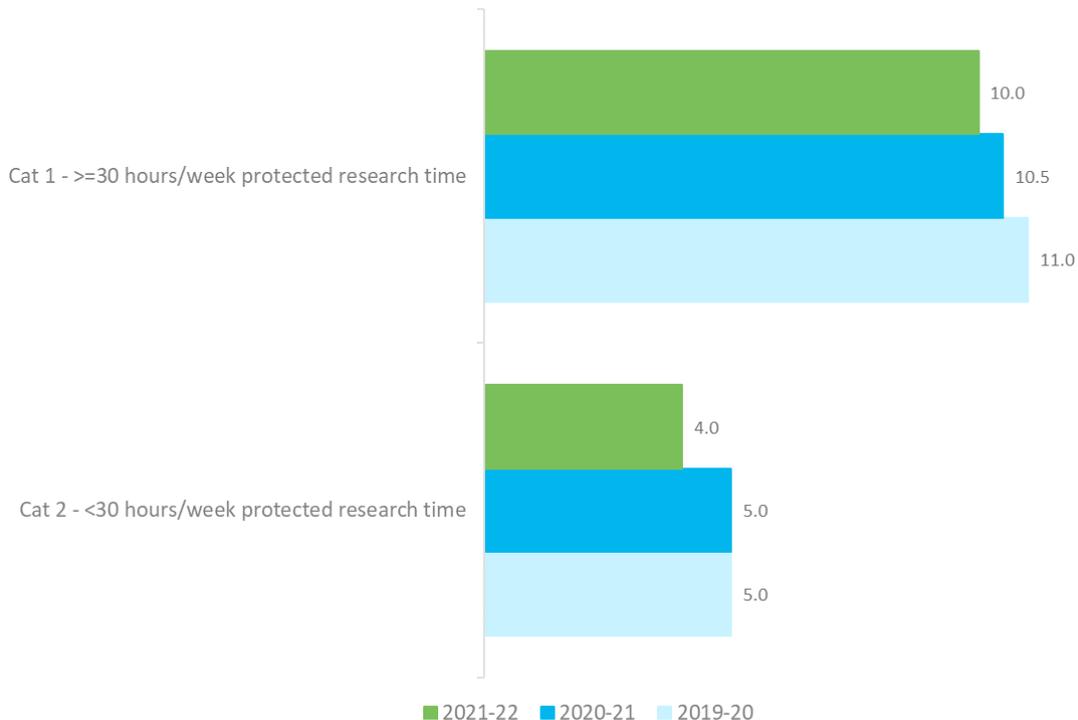


Building Research Capacity

BCMHSUS had a total of 14 researchers in FY 2021-22, with 10 having greater than 30 hours of protected research time per week (Figure 40). While this is a decrease from previous years, a number of BCMHSUS clinicians engaged in research

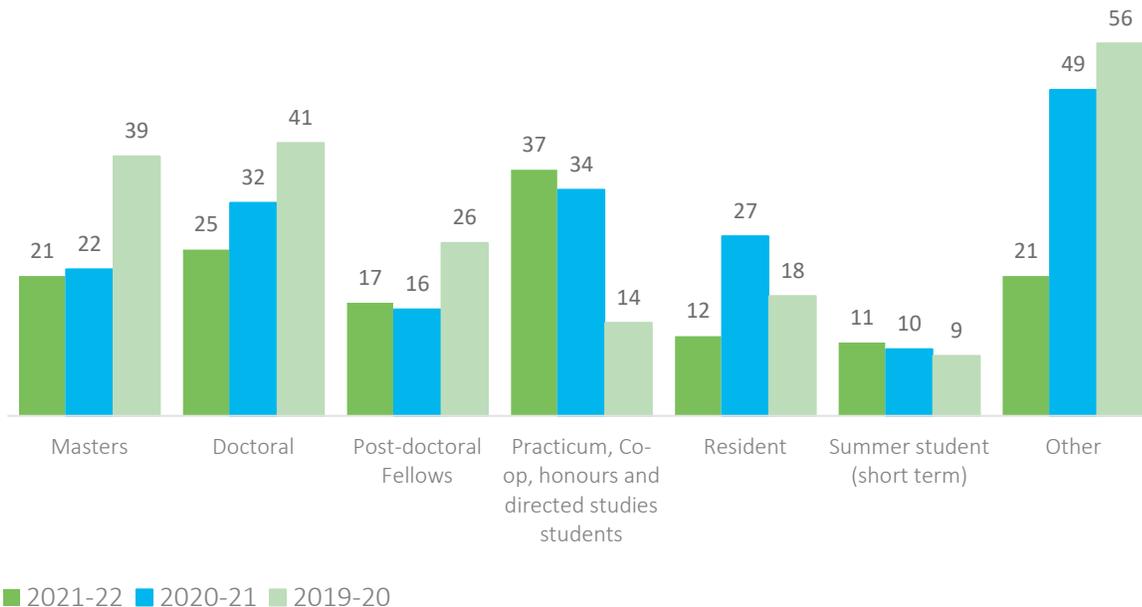
are now counted in the BCCHR totals following the operational transfer of Child & Youth Mental Health back to BC Children's Hospital.

FIGURE 40 Total Number of BCMHSUS Researchers by Category



During FY 2021-22, BCMHSUS researchers provided training and supervision to a total of 144 trainees, a decrease of 46 over last FY (see Figure 41).

FIGURE 41 Total Number of BCMHSUS Trainees by Category



Advancing Health and Policy Benefits

See Table 14 for a detailed breakdown of clinical trial activity by fiscal year. Of note is that all of BCMHSUS trials contained enrollment figures in all REB (Research Ethics Board) records.

TABLE 14 BCMHSUS Clinical Trials

Fiscal Year	16-17	17-18	18-19	19-20	20-21	21-22
Total Number of Clinical Trials active during the FY	2	5	7	7	5	8
Status of the Trial at the end of the FY:						
Total Number of Active Trials	2	5	7	7	4	7
Total Number of Trials that closed during the FY	0	0	0	0	1	1
Enrolment Numbers:						
Expected Local Subject Enrolment (for the term of the study)	450	902	1,217	1,320	1,115	1,400
Total Cumulative Subject enrolment at the end of the FY	244	423	465	565	551	596

Grant funding type is reported for Clinical Trials in Figure 42. This information is sourced from the REB (Research Ethics Board) file and reflects the funding type entered as part of the ethics application (see Glossary – Appendix 1, page 65 for a definition of funding types). The majority, eighty percent (75%) of BCMHSUS’ Clinical Trials are Grant funded.

Figure 42

FIGURE 42 BCMHSUS Percentage of Clinical Trial Grant Funding Type – Active and Terminated Trials within the FY

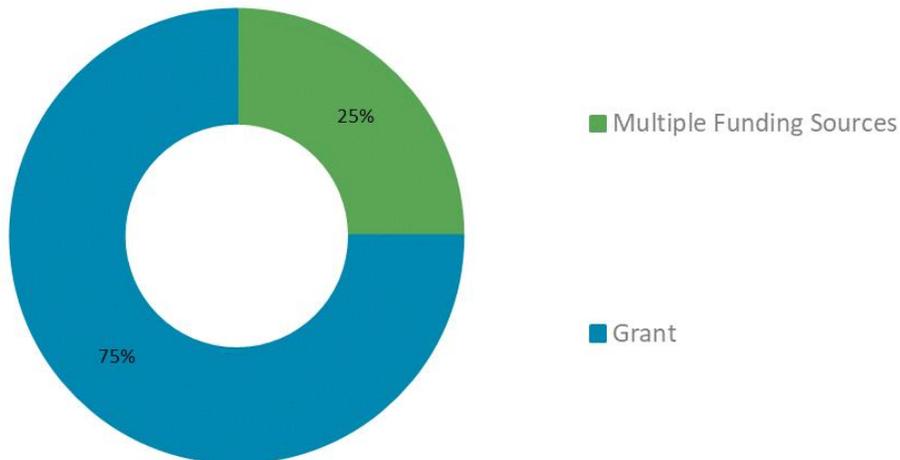


Table 15 reflects BCMHSUS' Top Three Achievements/Accomplishments/Highlights, and can include awards, citations, clinical programs, either in progress or historical, and be relevant to FY 2021-22 timeframe (April 1, 2021 - March 31, 2022).

TABLE 15 BCMHSUS Top Three Achievements/Accomplishments/Highlights

<p>BCMHSUS RESEARCHER IS RECEIPT OF THE 2021 GEOFFREY L. HAMMOND LECTURESHIP</p>
<p>Dr. S. Evelyn Stewart is recipient of the 2021 Geoffrey L. Hammond Lectureship in recognition of her leadership and significant contributions to the field of mental health. The Geoffrey L. Hammond Lectureship recognizes investigators on the Oak Street Campus who have made a significant impact on improving the health and well-being of children and/or families, served as a role model and mentor to junior researchers, trainees and students over the last 10 years, and provided leadership to the research community. In addition to being a child and adolescent psychiatrist, Dr. Stewart is a clinical, genetic and neuroscience researcher. Her research focuses on biologic, phenotypic, familial and treatment aspects of childhood-onset neuropsychiatric disorders, such as obsessive-compulsive disorder (OCD). She has authored over 115 peer-reviewed papers and 13 chapters on genetic, clinical and treatment aspects of obsessive compulsive and related disorders through the lifespan. Her publications have appeared in highly respected journals, including the Journal of the American Academy of Child and Adolescent Psychiatry, JAMA Psychiatry, Molecular Psychiatry and the Journal of Clinical Psychiatry.</p>
<p>BCMHSUS TRAINEE RECEIVES MICHAEL SMITH FOUNDATION FOR HEALTH RESEARCH AWARD</p>
<p>Dr. Heather Palis, a postdoctoral research fellow under the supervision of Dr. Tonia Nicholls (BCMHSUS) and Dr. Amanda Slaunwhite (BC Centre for Disease Control), received a Trainee Award from the Michael Smith Foundation for Health Research. In addition to receiving the 2020/2021 UBC Marshall Scholarship and being successful in the CIHR Fellowship competition (ranking in the top 1% of the national applicant pool), Dr. Palis has also now received a MSFHR Trainee Award. Dr. Palis's research uses administrative health and corrections data to identify trends of overdose and recidivism among people with criminal justice system involvement and psychiatric disorders in British Columbia.</p>
<p>BCMHSUS RESEARCHER RECEIVES THE DR. ELLIOT GOULD GRADUATE FELLOWSHIP IN MENTAL HEALTH POLICY</p>
<p>Dr. Amanda Butler received the Dr. Elliot Gould Graduate Fellowship in Mental Health Policy. Dr. Butler is supervised by Dr. Tonia Nicholls. This new award from Simon Fraser University has the purpose of recognizing graduate students who have demonstrated academic excellence and a commitment to mental health policy research and will support Dr. Butler's work in mental health and substance use epidemiology focusing on people who experience incarceration in British Columbia. Her study has three primary aims: (1) to estimate the prevalence of mental disorder, substance use disorder, and co-occurring disorders among people who experience incarceration in BC; (2) to examine the association between mental health status and time to reincarceration; and (3) to examine the association(s) between various substance use profiles and reincarceration patterns.</p>

BC CENTER FOR DISEASE CONTROL/UBC CDC (BCCDC)

Producing and Advancing Knowledge

In FY 2021-22, researchers affiliated with BCCDC were awarded a total of \$5,823,030 in research funding, which represents a 28% decrease over last fiscal year. The high dollar amount last year was the result of BCCDC’s leadership role in management of the COVID-19 pandemic for the Province of BC. The amount awarded as Operating Grants (\$5,110,654) makes up 88% of total awards. A breakdown of funding types and subtypes can be found in Figure 43 and by funding source category in Figure 44.

BCCDC’s portion of the Research Support Fund Program grant totaled \$174,547 for FY 2021-22 but is not included in total research funding or the figures below. Because of its public and population health mandate, research at BCCDC is very much embedded within its clinical mandate and, as such, is also supported by operating funding to a significant degree. Total Covid-19 related research funding was \$2,869,560 and is included in figure 43.

FIGURE 43 Total BCCDC Research Funding by Funding Type and Sub-type by Fiscal Year

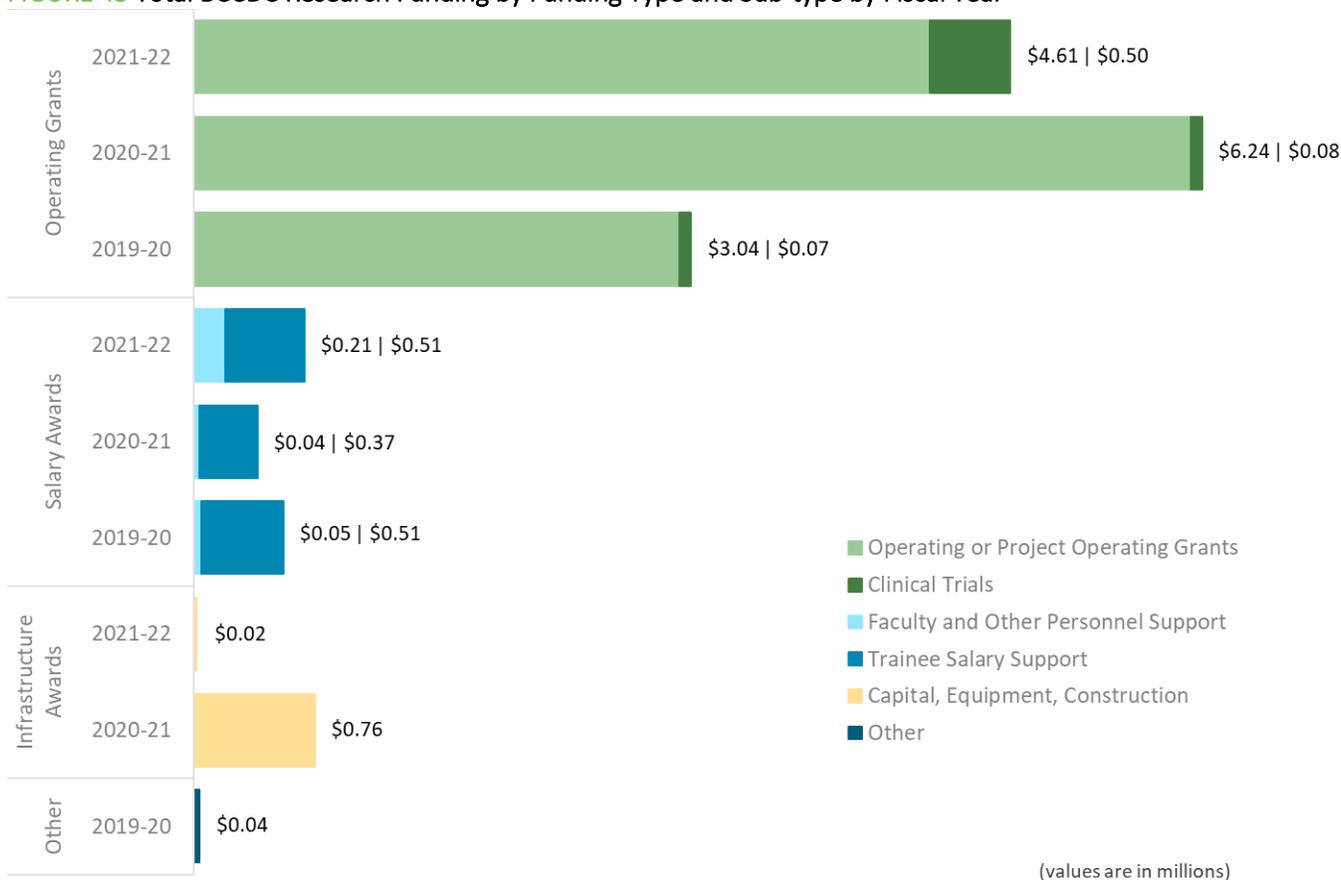
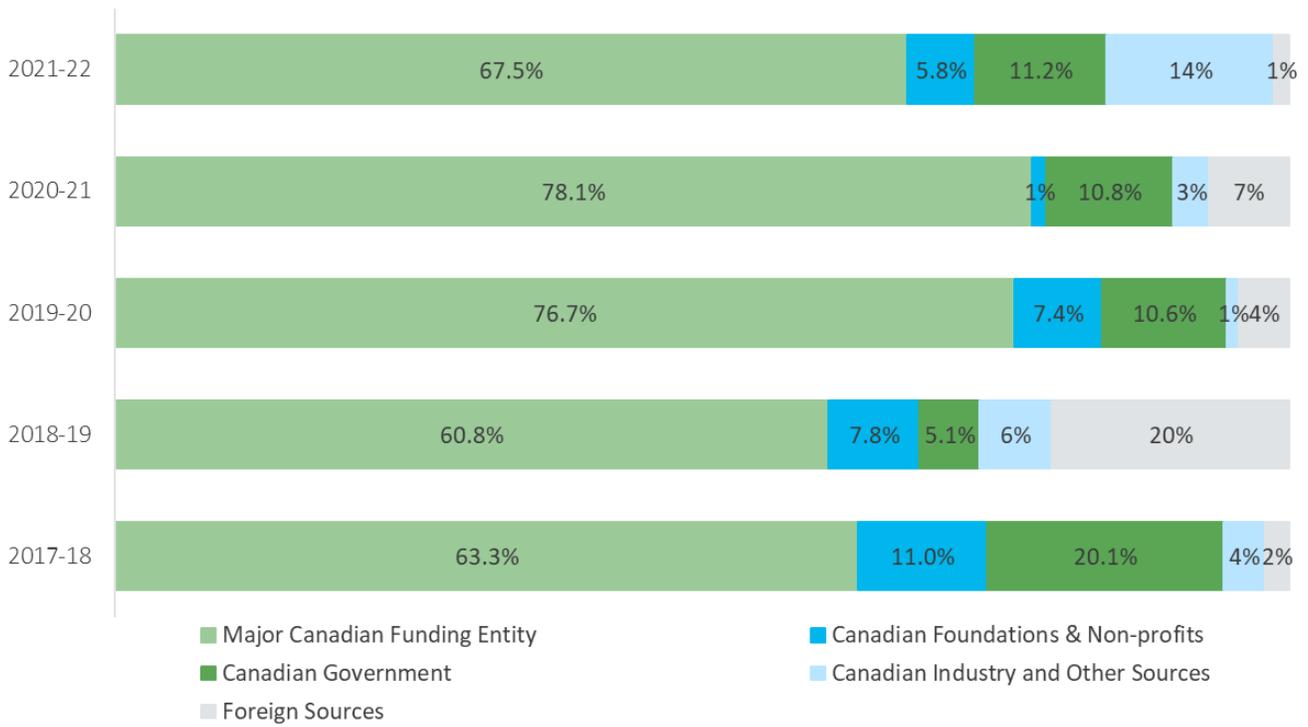


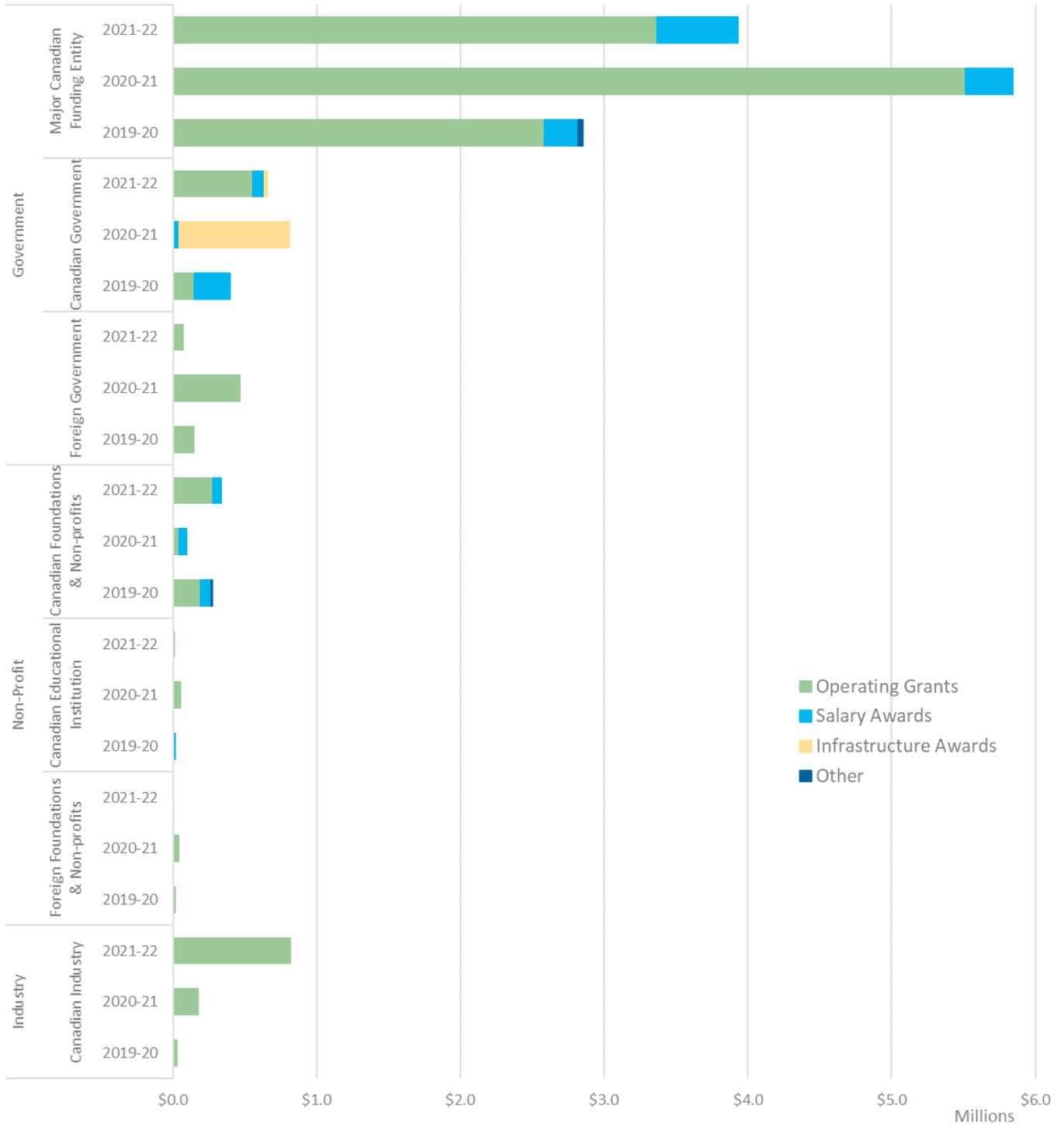
Figure 44 shows funding by funding source category.

FIGURE 44 Percentage of BCCDC Research Funding by Funding Source Category by Fiscal Year



The top two funding categories in FY 2021-22 are Major Canadian Funding Entity (67.5%) and Canadian Industry and Other sources (14%). Figure 45 details the funding categories by RISE sector, funding source category and funding type.

FIGURE 45 Total BCCDC Research Funding by RISE Sector, Funding Source Category and Type by FY



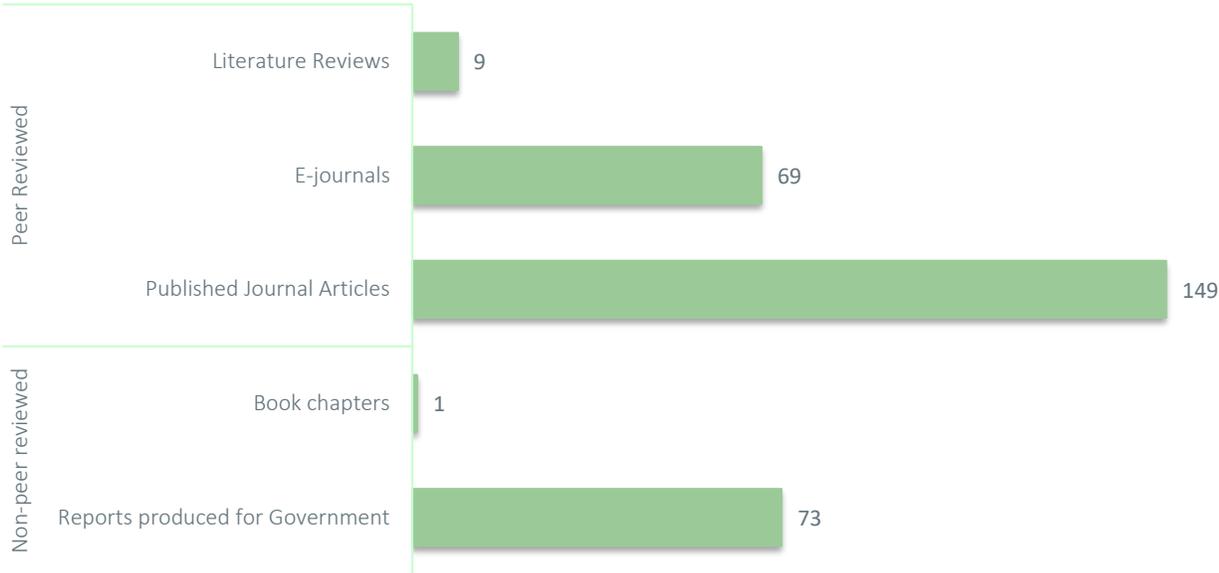
The application success rate is reported for the Fall 2021 and Spring 2022 CIHR grant competitions in Table 16. BCCDC was successful in the Project Grant competitions for a total of 2 awards, beating the national average in the Spring Project competition.

TABLE 16 BCCDC Annual Grant Application Success Rate

Grant Funding Opportunity	National Overall Results % (Approved/Submitted)	BCCDC Results % (Approved/Submitted)
2021-09 Project Grant	26.0% (523/2,014)	0% (0/2)
2022-03 Project Grant	22.3% (468/2,095)	28.6% (2/7)

BCCDC had a total of 301 publications of which 75% were peer reviewed. Total number of publications by type and category (peer vs. non-peer reviewed) is seen in Figure 46. The program total represents the number of publications where at least one program researcher was an author of the publication. When researchers from more than one research entity/program collaborate on the same publication, it is counted once for each program.

FIGURE 46 Total Number of BCCDC Publications by Type and Category

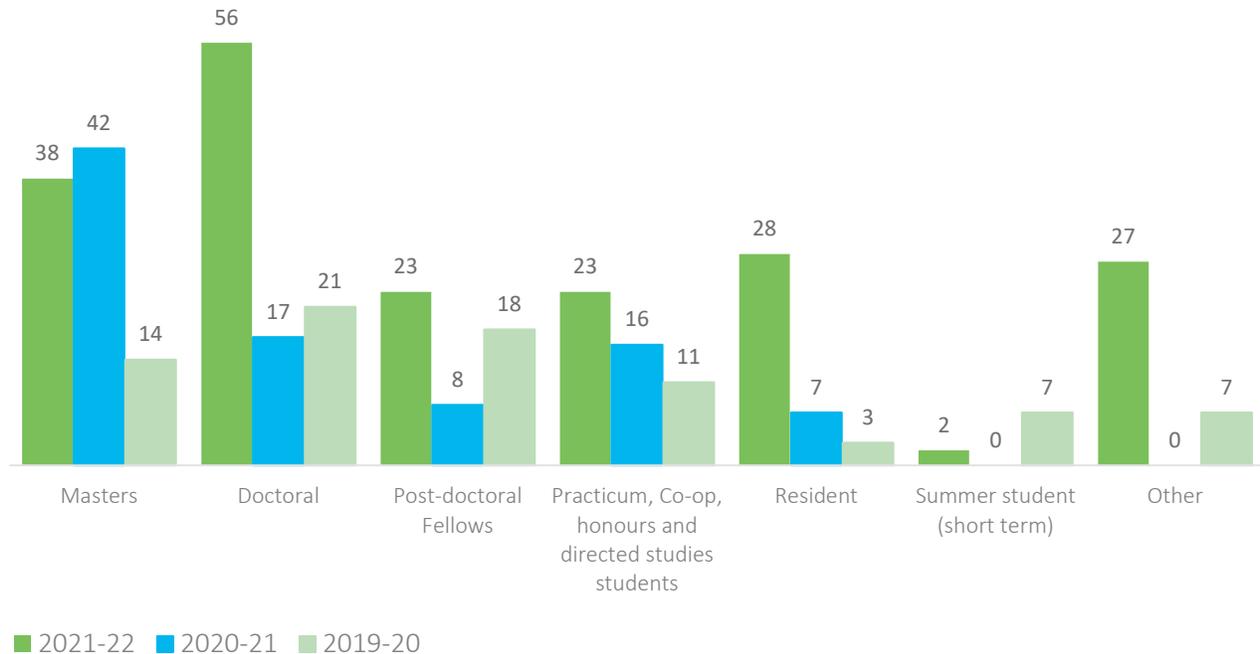


Building Research Capacity

BCCDC defines a researcher as any principal investigator or co-investigator involved in BCCDC research projects. BCCDC had a total of 47.5 researchers meeting this definition in FY 2021-22, an increase of 5 of FY 2020-21.

During FY 2021-22, BCCDC researchers provided training and supervision to a total of 197 trainees (see Figure 47) an increase of 109. The largest increase was in the Doctoral category.

Figure 47 Total Number of BCCDC Trainees by Type



Advancing Health and Policy Benefits

See Table 17 for a detailed breakdown of clinical trial activity by fiscal year.

TABLE 17 BCCDC Clinical Trials

Fiscal Year	16-17	17-18	18-19	19-20	20-21	21-22
Total Number of Clinical Trials active during the FY	5	5	9	11	12	14
Status of the Trial at the end of the FY:						
Total Number of Active Trials	5	4	8	10	11	14
Total Number of Trials that closed during the FY	0	1	1	1	1	0
Enrolment Numbers:						
Expected Local Subject Enrolment (for the term of the study)	2,696	2,750	6,699	10,579	12,625	12,814
Total Cumulative Subject enrolment at the end of the FY	2,656	1,639	2,707	2,961	1,663	3,613

Grant funding type is sourced from the REB (Research Ethics Board) file and reflects the funding type entered as part of the ethics application (see Glossary – Appendix 1, page 65 for a definition of funding types). Seventy-one

percent (71%) of BCCDC’s clinical trials are grant funded, 14% have multiple funders, with the remaining 14% with no funding.

Table 18 reflects BCCDC's Top Three Achievements/Accomplishments/Highlights, and can include awards, citations, clinical programs, either in progress or historical, and be relevant to FY 2021-22 timeframe (April 1, 2021 - March 31, 2022).

TABLE 18 BCCDC Top Three Achievements/Accomplishments/Highlights

<p>TOOLS FOR CLIMATE CHANGE ADAPTATION</p>
<p>During the unprecedented heat dome in June 2021, there were an estimated 740 excess deaths across the province. Research on deaths during the heat dome led to the development of the BC Heat Alert and Response System (BC HARS). The BC HARS is a 2-tier alerting system that distinguishes between a heat warning (i.e. very hot weather) and an extreme heat emergency (i.e. dangerously hot weather). It supports the use of broadcast intrusive alerting in the event of an extreme heat emergency. Paired with the Extreme Heat Preparedness Guide, both tools will help protect the BC population from the effects of extreme hot weather events in the future.</p>
<p>BC PROVINCIAL COVID-19 CONSENT TO CONTACT REGISTRY DATABASE (CCRD)</p>
<p>The registry contains the contact details of people who have previously tested positive for COVID-19 and have given their consent to be contacted about related research. Qualified B.C. researchers can access the registry and connect with participants about research opportunities across the province. Since its launch, the CCRD has recruited more than 60,000 British Columbians interested in participating in research and have supported 10 clinical and public health research studies with more than 39,500 potential participants. This helped researchers save a significant amount of time recruiting participants. This registry model/framework, developed in response to the COVID-19 pandemic, can serve as a legacy framework for future rapid response clinical research support.</p>
<p>CLINICAL RESEARCH ROLES</p>
<p>BCCDC was a key partner in the COVID-19 Clinical Research Coordination Initiative which received the Clinical Trials BC Service & Support Award. This province-wide partnership program created innovative health systems and structures to quickly capture and collate collective feedback enabling the prioritization and coordination of COVID-19.</p> <p>Dr. Mark Gilbert was awarded an Applied Public Health Chair co-funded by the Canadian Institutes of Health Research (CIHR) and Public Health Agency of Canada (PHAC). His work will focus on improving the equity, appropriateness, and sustainability of sexually transmitted and blood-borne infection testing systems through implementation science research.</p> <p>Dr. Troy Grennan received the MSHRBC Health Professional-Investigator award to examine the use of doxycycline as either a daily prevention therapy or an 'after sex' prevention tool for sexually transmitted infections in gay, bisexual, and other men who have sex with men.</p>

WOMEN'S HEALTH RESEARCH INSTITUTE (WHRI)

Producing and Advancing Knowledge

In FY 2021-22, researchers affiliated with WHRI were awarded a total of \$9,214,692 in research funding, which represents a 40% increase over last year. This large increase is due to a rise in the number of grants from CIHR and the Public Health Agency of Canada awarded to WHRI researchers in the past year. The amount awarded as Operating Grants (\$8,428,510) makes up 91.5% of total awards. A breakdown of funding types and subtypes can be found in Figure 48 and by funding source category in Figure 49.

WHRI's portion of the Research Support Fund Program grant totaled \$290,401.08 for FY 2021-22 but is not included in total research funding or the figures below. WHRI shares investigators with a number of other health research institutes and universities and benefits from additional external grant revenues linked to these investigators.

Total Covid-19 related research funding was \$2,831,029 and is included in the figure 48.

FIGURE 48 Total WHRI Research Funding by Funding Type and Sub-type by Fiscal Year

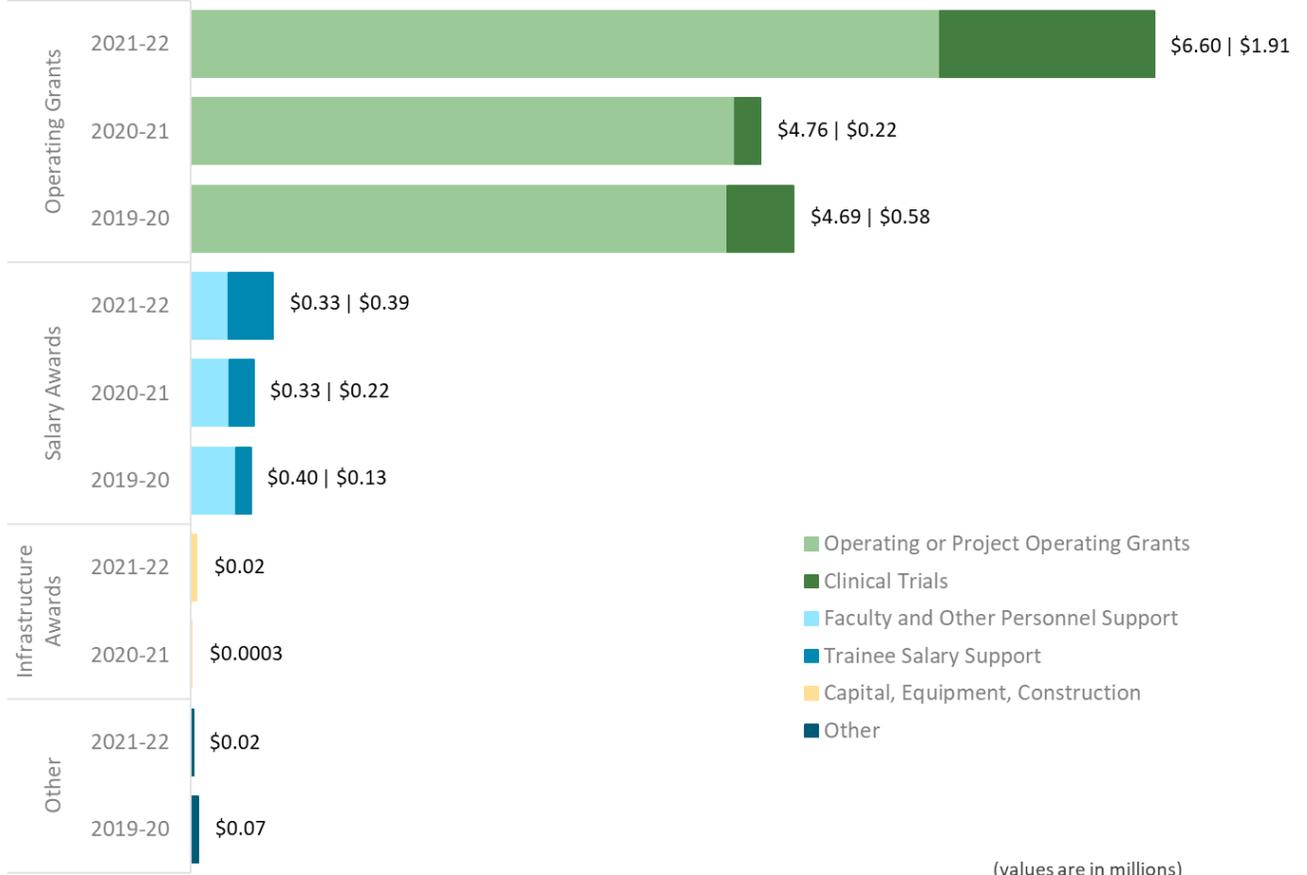
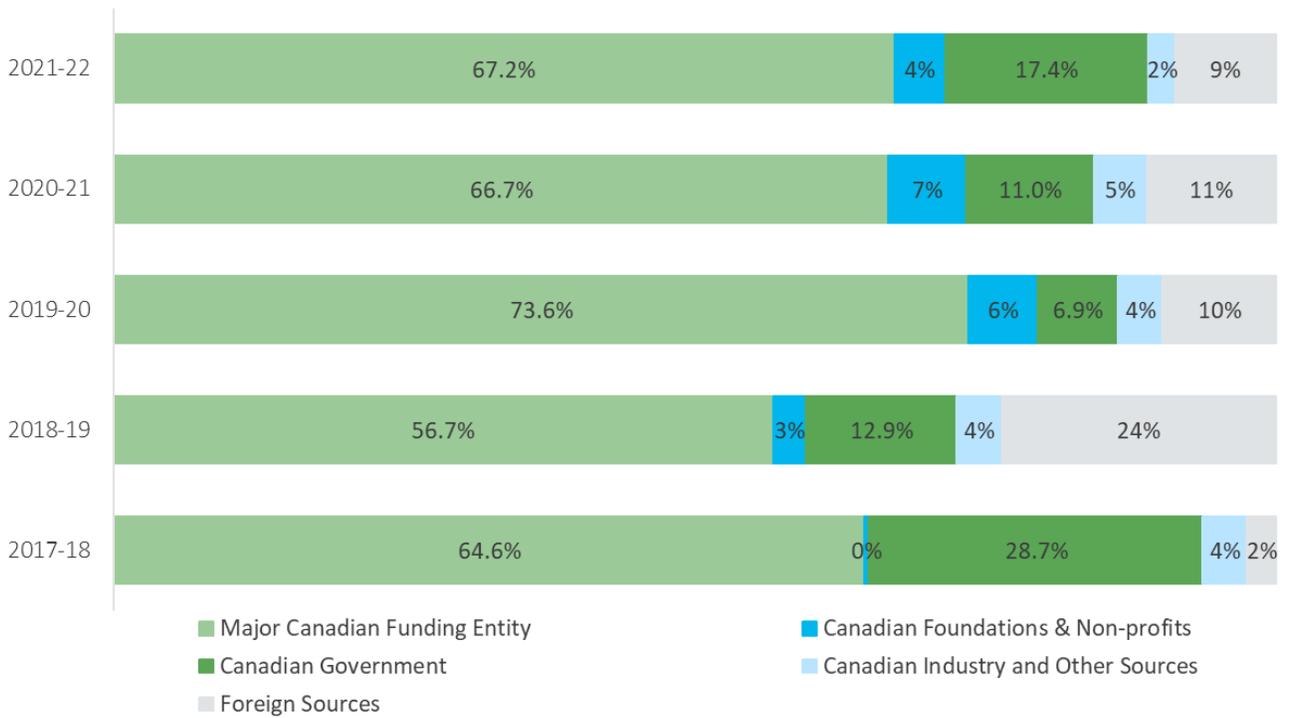


Figure 49 shows funding by funding source category.

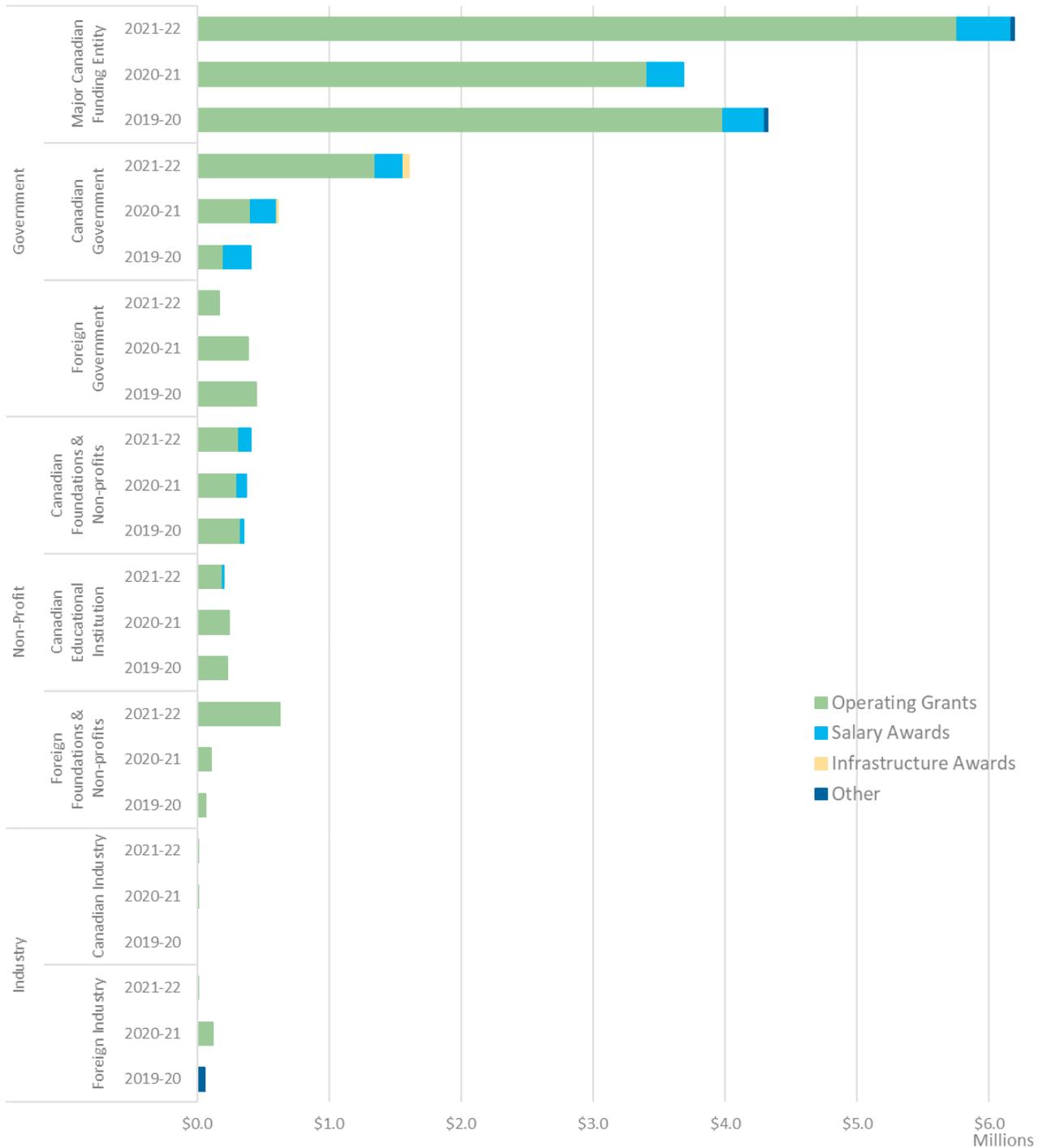
FIGURE 49 Percentage of WHRI Research Funding by Funding Source Category by FY



In FY 2021-22, the top two funding categories are Major Canadian Funding Entities (67.2%) and Canadian Government (17.4%). Figure 50 details the major funding

categories by RISE sector, funding source category and funding type.

FIGURE 50 Total WHRI Research Funding by RISE Sector, Funding Source Category and Type by Fiscal Year



The application success rate is reported for the Fall 2021 and Spring 2022 CIHR grant competitions. WHRI was successful in both Project Grant competitions with a total of 5 awards. In both Project Grant competitions, WHRI was

above the national average success rate. WHRI investigators apply for grant competitions that are offered by a variety of granting agencies.

TABLE 19 WHRI Annual Grant Application Success Rate

Grant Funding Opportunity	National Overall Results % (Approved/Submitted)	WHRI Results % (Approved/Submitted)
2021-09 Project Grant	26.0% (523/2,014)	40.0% (2/5)
2022-03 Project Grant	22.3% (468/2,095)	50.0% (3/6)

WHRI had a total of 1,006 publications in calendar year 2021 of which 97% were peer reviewed. Total number of publications by type and category (peer vs. non-peer reviewed) is shown in Figure 51. Peer review represents the gold standard for scientific credibility. The program

total represents the number of publications where at least one program researcher was an author of the publication. When researchers from more than one research entity/program collaborate on the same publication, it is counted once for each program.

FIGURE 51 Total Number of WHRI Publications by Type and Category



Three full fiscal years' worth of data is provided for WHRI 's four research specific social media channels; Facebook (member since Aug 2010); Twitter (member since August 2010); Instagram (member since May 2018; and LinkedIn (member since June 2017). Strategic use of social media, combined with tracking and reporting of this data directly supports our strategic aim to Increase and Promote Research Translation, Implementation, and Communication. Social media use also aligns with several domains within the [WHRI Strategic Framework for Knowledge Translation](#) (KT) including:

- Building KT Capacity: Promoting and hosting events to accelerate the dissemination of evidence to knowledge users.
- Advocating for a Culture of KT: Promoting KT activities and KT products.
- Manage KT Projects: Facilitating KT events and activities, including dissemination of research evidence to targeted

knowledge users (e.g. patients, providers, prescribers, decision makers); and track the impact of dissemination campaigns that increase the use of KT products.

In addition to our strategic alignment, social media is practically used to:

- Drive traffic to the WHRI website, which allows users to engage with our services and supports.
- Enhance the profile of the WHRI as one of only 3 women's research institutes in Canada.
- Amplifying the successes and opportunities of the women's health research community, including investigators, trainees, and those across PHSA programs.
- Strengthen and track the impact of WHRI events and KT opportunities (e.g., WHRI Symposia, @WomensResearch Wellness Exchange (public event), @WomensResearch Podcast, BC Women's Research Rounds)

Table 20 shows annual results of three fiscal years, compared to the previous fiscal year. These metrics are a measure of reach and engagement and provide an indication of the volume of activity.

In addition to the below activity, many WHRI researchers maintain their own professional accounts to engage peers, funders and patients, but this information is not tracked.

TABLE 20 WHRI Social Media Statistics

Social Media Channel		Followers			Activity Rate			
		# of followers	# of new followers	% change	# of likes	% change	# of shares	% change
Twitter	FY 2021-22	4,700	555	12%	1,700	-128%	791	-35%
	FY 2020-21	4,154	825	25%	3,871	-32%	1,069	-34%
	FY 2019-20	3,329	924	38%	5,676	34%	1,619	8%
LinkedIn	FY 2021-22	711	NA	-374%	130	-2306%	23	-574%
	FY 2020-21	3,372	557	68%	3,128	21%	155	80%
	FY 2019-20	2,011	705	54%	2,586	143%	86	21%
Facebook	FY 2021-22	843	67	-157%	90	-5081%	33	-1361%
	FY 2020-21	2,166	360	68%	4,663	-39%	482	-43%
	FY 2019-20	1,806	581	47%	7,641	96%	850	80%
Instagram	FY 2021-22	1,500	591	-67%	2,100	-430%	NA	NA
	FY 2020-21	2,507	889	55%	11,139	116%	NA	NA
	FY 2019-20	1,618	1,138	237%	9,641	525%	NA	NA

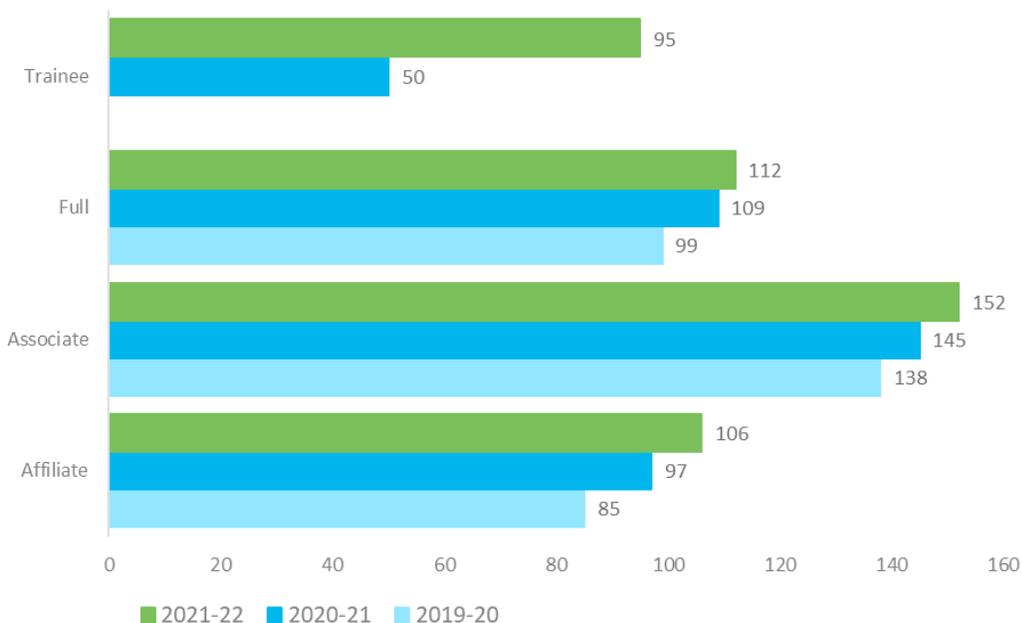
Building Research Capacity

In an effort to show WHRI’s activities, their membership statistics are shown (see Figure 52). In FY 2021-22, membership increased by 64 for a total of 465 members.

The increase is due in part to a new membership category introduced in FY 2020-21, Trainee Member. The membership categories are as follows:

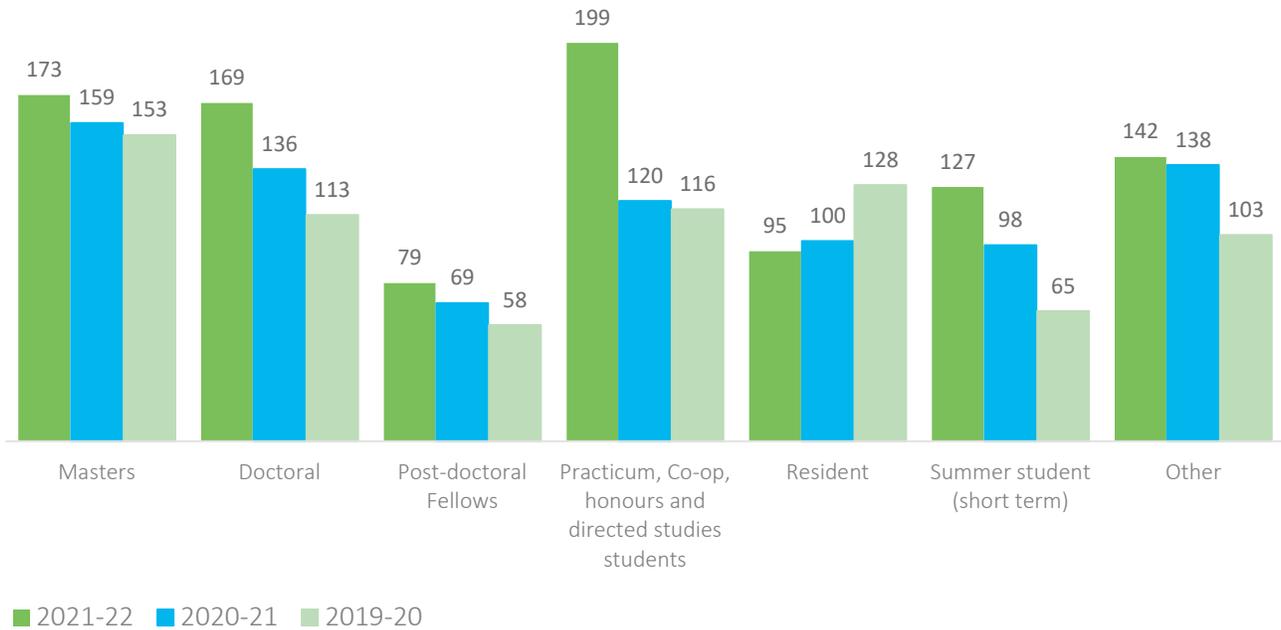
<i>Full Member</i>	Individuals involved in women’s health research for which the WHRI would be the only research institute affiliation.
<i>Associate Member</i>	Individuals who are involved in women’s health research, at least in part, but have a strong relationship with another research institute (e.g., BCCHR) that they wish to maintain; the result is a dual membership with the WHRI and their current affiliation.
<i>Affiliate Member</i>	Individuals who are extensively involved with another institute but may have projects that would overlap with WHRI.
<i>Trainee Member (new 2020-21)</i>	Individuals who are undergrads, grad students, medical students, research and clinical fellows, international students, and any person in a degree-granting program who is engaged in research.

Figure 52 Total WHRI Membership by Category



WHRI researchers provided training and supervision to a total of 984 trainees (see Figure 53) an increase of 164 over last fiscal year.

Figure 53 Total Number of WHRI Trainees by Type



Advancing Health and Policy Benefits

Clinical trial data from the REB (Research Ethics Board) is provided utilizing the same methodology as last year. See Table 21 for a detailed breakdown of clinical trial activity by fiscal year.

TABLE 21 WHRI Clinical Trials

Fiscal Year	16-17	17-18	18-19	19-20	20-21	21-22
Total Number of Clinical Trials active during the FY	11	31	38	20	23	22
Status of the Trial at the end of the FY:						
Total Number of Active Trials	7	23	30	16	17	16
Total Number of Trials that closed during the FY	4	8	8	4	6	6
Enrolment Numbers:						
Expected Local Subject Enrolment (for the term of the study)	1,162	6,653	10,928	8,838	8,864	8,868
Total Cumulative Subject enrolment at the end of the FY	545	3,092	3,160	1,507	1,938	1,941

Grant funding type is reported for Clinical Trials in figure 54. This information is sourced from the REB (Research Ethics Board) file and reflects the funding type entered as part of the ethics application (see Glossary – Appendix 1, page 65 for a definition of funding types). Thirty-two percent (32%) of WHRI’s clinical trials are Grant funded, and 14% are Industry funded.

FIGURE 54 WHRI Percentage of Clinical Trial Grant Funding Type – Active and Terminated Trials within the FY

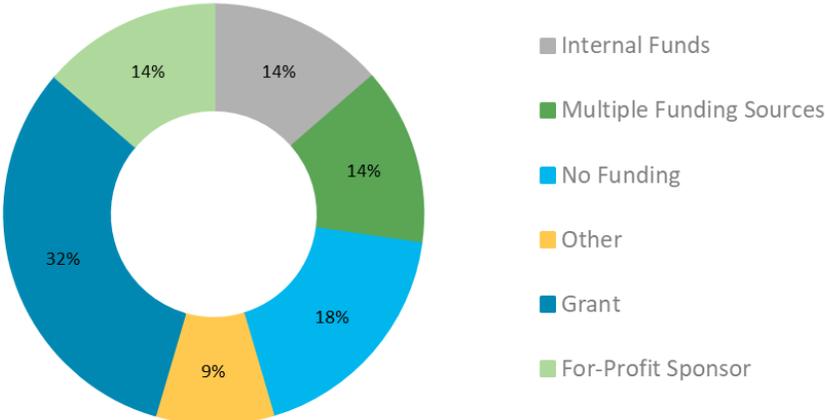


Table 22 reflects WHRI’s Top Three Achievements/Accomplishments/Highlights, and can include awards, citations, clinical programs, either in progress or historical, and be relevant to FY 2020-21 timeframe (April 1, 2020 - March 31, 2021).

TABLE 22 WHRI Top Three Achievements/Accomplishments/Highlights

<p>THE WHRI LAUNCHED A NEW MULTI-STAKEHOLDER PARTICIPATORY PROJECT TO INFORM GUIDANCE FOR GENDER-EQUITABLE PRACTICE WITHIN BC’S WOMEN’S HEALTH RESEARCH COMMUNITY</p>
<p>In September 2021, WHRI Scientific Advisor Dr. Angela Kaida and patient-partner Co-Lead Beverly Pomeroy were awarded a Michael Smith Health Research BC Convening and Collaborating Award (C2) for their project: “Beyond the Binary in BC: taking a patient-oriented and trauma-informed approach to building partnerships and dialogue to incorporate gender equity into women’s health research”. The C2 award, which is designed to build collaborations between health researchers and other health system users such as patients and providers, catalyzed a critical conversation surrounding gender equitable women’s health research led by the WHRI. The Beyond the Binary project has mobilized stakeholders across PHSA programs: BC Women’s Hospital + Health Centre, TransCare BC, and BC Children’s Hospital Research, as well as across academic institutions: UBC, SFU, and UNBC. The project has created a safe space to discuss a complex topic and provide a responsive environment. Through collaboration with people from trans, intersex, research, health, ethics, and academic communities, the WHRI is currently developing context-specific resources and recommendations for researchers and health decision-makers to bridge this knowledge gap. (LINK: https://whri.org/our-initiatives/beyond-the-binary/)</p>
<p>THE WHRI AND BCCHR ARE JOINTLY HOSTING A ONLINE DIGITAL HEALTH EDUCATION SERIES FOR THE BC RESEARCH COMMUNITY</p>
<p>The WHRI is collaborating with the BC Children’s Research Institute to host a joint Digital Health Education Series, which aims to support investigators and trainees engaged in digital health projects and to celebrate innovation in women’s, newborn, and children’s health in BC. The monthly seminar series, which features presentations and workshops from both industry and research experts, was established in order to build capacity and knowledge translation for digital health research and innovation across our research and clinical communities. This virtual learning series engages researchers, care providers, and other stakeholders interested in incorporating digital technologies in a health intervention or health systems process and aims to equip learners to succeed – from project initiation through to implementation. (LINK: https://whri.org/our-services/digital-health-hub/digital-health-learning-corner/)</p>
<p>THE WHRI, BCCH AND BCMHSUSRI HAVE ESTABLISHED AN EQUITY, DIVERSITY AND INCLUSION WORKING GROUP FOR OUR RESEARCH COMMUNITIES</p>
<p>The WHRI, BC Children’s Hospital Research Institute and the BC Mental Health and Substance Use Services Research Institute have jointly established an Oak Street Campus Research Institutes Equity, Diversity, and Inclusion (EDI) Working Group. This joint committee is being co-led by Dr. Lori Brotto, WHRI Executive Director and Dr. Wendy Robinson, BCCHR Associate Director of Research. The purpose of this working group is to support the Oak Street Campus Research Institutes in identifying needs, developing policies, and providing constructive change to instill respect, diversity, equity and inclusion within their communities. While this work still in its initial stages, one of the main aims of this working group is to establish guidelines for EDI activities across the Research Institutes.</p>

REGISTRIES & DATASETS



Advancing Health and Policy Benefits

For the ninth year, data was collected from PHSA’s registries and data sets to capture information to allow identification of users of the databases, how the data support research and a benefit classification which provides a deeper understanding of the benefits resulting from the use of these data for research.

Data stewards for a total of 16 PHSA registries or datasets, were invited to participate in a survey designed to assess the research activities of the registry/dataset. Completed surveys from 15 out of the 16 registries/datasets were obtained. The Research Metrics working group drew a distinction between two types of databases that might be

counted. The first are those that serve as registries. These are the result of significant infrastructure investment in the collection of longitudinal data that are regional, provincial, or national in scope regarding provision of services to specific population(s), maintained for the purposes of undertaking analysis, surveillance and/or research. They represent a significant resource for and investment in research. The second (not collected) are short-term, project-related databases that are primarily grant funded and are not maintained for use beyond the term of a given research project.

Registry/data set Definition/Purpose

The information on each registry/dataset was compiled from online resources and is described below.

REGISTRY/DATASET	PURPOSE
BC CANCER REGISTRY	The BC Cancer Registry is a population-based registry of all cancers diagnosed in British Columbia residents. It collects data and generates cancer statistics on the BC Population for the purpose of monitoring the burden of cancer in the province. It also serves as a source of information for research.
BC CARDIAC REGISTRY (HEARTIS)	Heart Information System (HEARTis) tracks a patient journey for all current and future cardiac procedures, throughout British Columbia, from registry on the waitlist to procedure completion and follow up. Its purpose is to support clinical care, quality assurance and improvement, and outcome-based research.
PARAMEDIC SYSTEM EVALUATION AND RESEARCH DATABASE (PSERD)	The (PSERD) contains data abstracted from electronic patient care records (ePCR), derived from all paramedic-patient encounters in the British Columbia Emergency Health Services (BCEHS). The PSERD also contains data from the computer aided dispatch system (911).
BCCDC COVID-19 DATASET	This is an integrated dataset utilized for the management of the COVID-19 pandemic and includes data from the Ministry of Health, Regional Health Authorities, and PHSA.
BC PERINATAL DATABASE REGISTRY (BCPDR)	The (BCPDR) contains data abstracted from obstetrical and neonatal medical records on nearly 100% of births in the province of British Columbia from over 60 hospitals as well as births occurring at home attended by BC registered midwives. The BCPDR also collects data on maternal postpartum readmissions up to 42 days post-delivery and baby transfers and readmissions up to 28 days after birth. Data access is provided for public-interest research purposes, surveillance, program delivery, and evaluation.
BC TRAUMA REGISTRY	Provides data collection, reporting and support of research and quality initiatives related to trauma care.
CENTRAL TRANSFUSION REGISTRY	The Central Transfusion Registry (CTR) is a database operated by the BC Provincial Blood Coordinating Office (PBCO) and contains records of recipients who have received blood and blood products in British Columbia and the Yukon. The CTR was the first population-based transfusion registry in Canada and remains one of the largest such registries in North America since its inception in 1999.

REGISTRY/DATASET	PURPOSE
BCCH'S BIOBANK	The mission of the BCCH BioBank is to provide a comprehensive service for the collection, processing, storage, rapid access and retrieval of biospecimens and clinical information for research projects using a professional and compassionate approach to patient consenting that adheres to the highest standards of research ethics and patient privacy. A single biospecimen from one patient has the ability to fuel numerous research projects, any one of which might lead to an important medical breakthrough. BC Children's Hospital BioBank collects samples from patients at both BC Children's Hospital and BC Women's Hospital.
ENDOMETRIOSIS AND PELVIC PAIN INTERDISCIPLINARY COHORT (EPPIC)	A prospective data collection to evaluate patient outcomes after interdisciplinary care for endometriosis and pelvic pain
PROMIS-BC RENAL/TRANSPLANT	Patient Records and Outcome Management Information System – is the renal care community's clinical information system. With data collected from the 39 renal units in British Columbia, PROMIS supports: Individual patient care management; Renal unit management; Continuous quality improvement and research; Outcomes-based planning. PROMIS database is used as a source of important epidemiological data in support of clinical trials and for assessing new therapies.
BREAST CANCER SCREENING DATABASE (PREVIOUS NAME - SCREENING MAMMOGRAPHY DATABASE)	Clinical system for scheduling, reporting and tracking of screening mammography exams.
CERVICAL CANCER SCREENING DATABASE	A population based clinical system for cervical cancer screening as well as a lab system for all gynaecological cytology performed by the Provincial lab.
LUNG CANCER SCREENING PROGRAM	The BC Lung Screen Trial provides the only access to organized lung cancer screening to eligible B.C. residents.
TUMOUR TISSUE REPOSITORY (TTR)	TTR is a provincial resource to support translational cancer research at BC Cancer, across Canada and internationally. The TTR is a state-of-the-art tumour bank that collects tissues, blood, and clinical information and processes these to create anonymous cases that can be studied by cancer researchers to understand how cancer develops, how it grows, how it spreads, and how it responds to treatment.

Supporting Research Activities

For FY 2021-22, fourteen (14) of registries/datasets are used for the purpose of research as defined by UBC (see Glossary – Appendix 1, page 66). In addition, respondents were asked to identify other activities they provide in support of research. Table 23 lists the support activities by

registry/dataset and shows the number of times in the past three fiscal years that a registry has provided a particular support activity. These research support activities are ranked from most provided to least over the three-year period.

TABLE 23 Research Activities Supported by Registries and Datasets

Research Support Activity	Cancer	Cardiac	Cervical	Perinatal	Renal	Breast Cancer	Transplant	Trauma	TTR	Biobank	EPPIC	Training	BCEHS-Paramedic	BCCDC	Grand Total
Assist in identifying knowledge gaps and improvement needs	3	3	1	3	3	3	3	3		1	2	2	3	2	32
Support in managing and linking data	3	3	1	3	3	3	1	3	2	3	2	1	2		30
Support in designing research studies	1	3		3	3	3	2	3	2	1	3	2	2		28
Facilitate communication to identify pertinent research question		3	1	2	3	3	3	2		1	1	2	3	2	26
Support in conducting biostatistical analysis		3	1	3	3	3	2	3			3	2		2	25
Support in ensuring studies meet regulatory standards	2	3		3	2	3	2	1	2	1	2	2			23
Provide specialized and multidisciplinary methodological expertise	2	3	1	2	3	1	2	3			2	2		2	23
Application of new technical capabilities to provide more timely access to wider range of data	2	2		2	1			4		1		1	2		15
Teaching and hands on training for the above				2	3			1		1	1	1			9
Support in providing and teaching project management skills					3					1	1				5
Grand Total	13	23	5	23	27	19	15	23	6	10	17	15	12	8	216

Respondents were asked if they submit data to external organizations for the purposes of research. See Table 24 for the breakdown of data set type by registry/dataset for FY 2021-22. This table lists the type of external data set and

shows the number of times in the past three years that the registry has submitted data. The type of dataset is ranked from most submitted to least.

TABLE 24 Provision of Data to external Data Sets by Registry

Type of External Data Set	Cancer	Cardiac	Perinatal	Renal	Breast	Transplant	Trauma	TTR	Biobank	Lung	EPPIC	BCEHS-Paramedic	Grand Total
Pan Canadian dataset	3	2	1	3	3	2	2	3	2	1			22
Provincial data		3	3	2		1			2			1	12
International dataset	3			3		3				2			11
Cross feeding within PHSA		1	3	2			2					2	10
Other		1	2								1		4
Grand Total	6	7	9	10	3	6	4	3	4	3	1	3	59

Names of the external datasets include:

Provincial:

- Chronic Disease Registry Initiative
- First Nations Health Authority
- Ministry of Health, Health Ideas, HDP
- Population Data BC
- BC COVID Biobank Network (BCCBN)
- The Centre for Health Evaluation and Outcome Sciences (CHÉOS)

Pan Canadian:

- Canadian Cancer Registry – Statistics Canada
- Canadian Organ Replacement Registry (CORR)
- Canadian Ovarian Experimental Unified Resource (COEUR) – Terry Fox Research Institute
- Canadian Partnership for Tomorrow Project – Canadian Partnership Against Cancer
- Canadian Tissue Repository Network (CTRNet)
- Covid-19 Immunity Task Force (CITF)
- HOPE Research Centre at Sunnybrook Health Sciences Centre
- Institute for Clinical Evaluative Sciences (ICES)
- Pan-Canadian Early Detection of Lung Cancer Study
- Public Health Agency of Canada (Canadian Breast Cancer Screening Database)
- PRrecision Oncology For Young people (PROFYLE)
- The Canadian Donation and Transplantation Research Program (CDTRP)

International:

- North American Association of Central Cancer Registries (NAACCR)
- International Agency for Research on Cancer (IARC – a division of the World Health Organization)
- International Cancer Benchmarking Partnership at Cancer Researchers UK
- International Society for Heart & Lung Transplant (ISHLT)
- Chronic Kidney Disease Prognosis Consortium (CKD-PC)
- ISHLT (International Society of Heart and Lung Transplant)

Nature of Research Activities

CIHR (Canadian Institutes of Health Research) categorizes health research into four broad themes: biomedical research, clinical research, health services research (research respecting health systems and services); and social, cultural, environmental and population health. Research pursued using the registries/datasets above are

categorized in Figure 55. Access requests are summarized in Figure 56. For examples of the types of research questions posed by researchers, please see Table 6 in the PHSA Research and Student Education Metrics Consolidated Summary Report.

FIGURE 55 Ranking of Predominant Nature of Research Questions Using Data from the Registries/Datasets

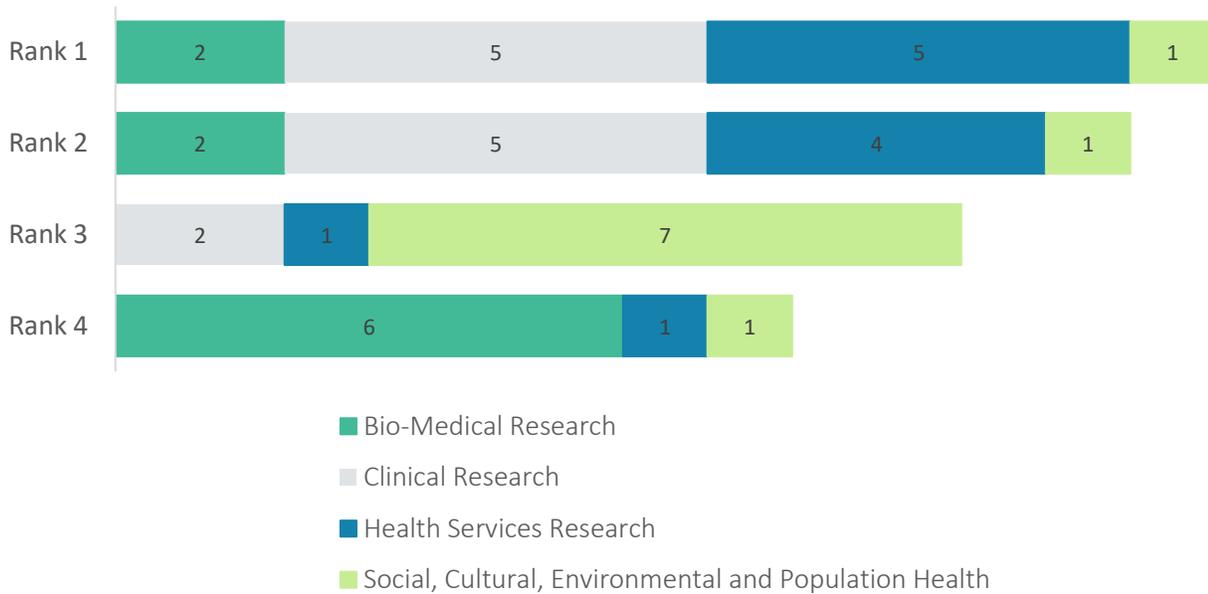
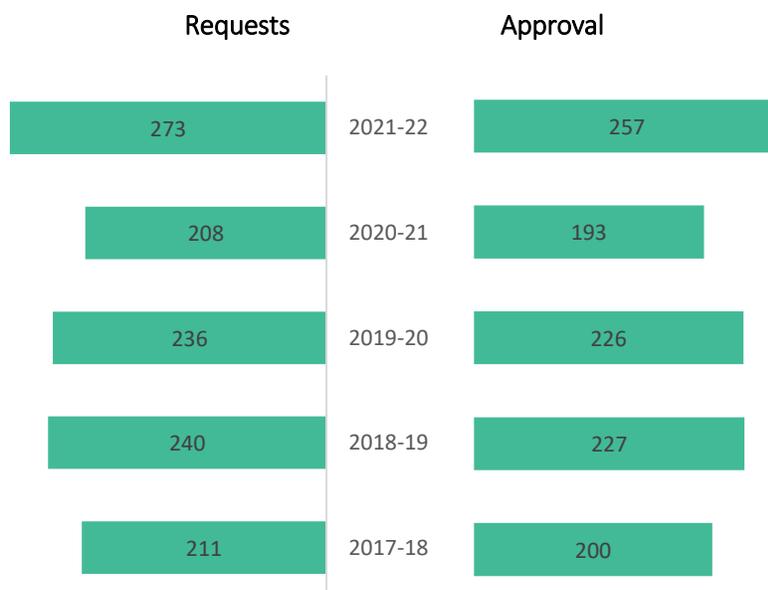


FIGURE 56 Research Access Requests and Approvals from Registry/Dataset by Fiscal Year



APPENDIX 1 - GLOSSARY

GLOSSARY	
TERM	DESCRIPTION <i>[DATA SOURCE]</i>
METRIC DEFINITIONS	
Metrics 1ab, 2b – Total annual grant awards, Total annual external grant awards by major funding categories by program or research entity	Total Annual Award (\$) for Grants, Awards and Contracts by Funding Source <i>[RISe annual file provided by UBC Office of Research Services]</i>
Metric 1c – Annual grant application success rate by program/research entity. Added in FY 09-10	Success rates for two CIHR operating grant competitions (March and September of applicable year) for BCCRI and BCCHR, BCMHSUS and WHRI. <i>[CIHR website for National results; Program results self-reported on the excel data collection form]</i>
Metric 1d – Total # of Publications Added in FY 10-11; Category addition in FY 11-12	Total number (of publications, not authors) published within applicable calendar year meeting the following criteria: Book, book chapter, reports produced for the government, peer-reviewed publication inclusive of published journal articles, case reports, essays, literature reviews, e-journals, and monographs. Excluded = abstracts, editorials, summaries, letters to the Editor, epubs, in press and submitted publications. <i>[Programs self-report utilizing SciVal to search Scopus utilizing researcher name; Program inputs data on excel data collection form]</i>
Metric 2a – Total number of trainees by program/research entity	Total Number (head count, not FTE) of Research Trainees by Student Type. (Exclude clinical trainees who are supported during their brief research rotations.) Research trainees counted will be any individuals who are primarily supervised by a researcher affiliated with the reporting unit, during all or a portion of the reporting year. <i>[Programs manually request trainee statistics from individual investigators and input data on excel data collection form]</i>
Metric 2c – Total number of researchers by program/research entity	List of Researcher Names including Research definition (This metric is to be collected based on BCCHR methodology category types wherever possible, if not available in that format, please designate your category as "5" and add your research definition in the space provided.) Added in FY 11-12 is a column to collect whether a researcher is a shared resource or 100% attributable to a specific program. <i>[Previous year's researchers are provided to each program from the researcher database in excel; Programs provide additions, deletions, changes on excel data collection form]</i>
Metric 2d - Infrastructure Investments - Major CFI Infrastructure Grants (Added FY 10-11)	Total FY \$ for Leading Edge Fund (LEF)/New Initiatives Fund (NIF) awards from Canada Foundation for Innovation. LEF projects sustain and further enhance the most advanced research and technology development efforts already supported by past CFI investments. LEF projects build on existing areas of research priority where institutions have a competitive advantage and a proven track record in enhancing Canada's science and technology capacity. NIF projects build Canada's capacity in new, promising areas of research and technology development. Also included in these amounts are the matching funds (industry, educational, charity, etc.) to these awards. Excluded from these amounts are \$'s associated with the Infrastructure Operating Fund (IOF) or Leaders Opportunity Fund (LOF) from CFI. These get reported under Infrastructure – HR awards and operating grant categories respectively.

TERM	DESCRIPTION [DATA SOURCE]
	<i>[RISe annual file provided by UBC Office of Research Services]</i>
Metric 2e – Research Support Fund Program grants (Added FY 12-13)	<p>A federally funded grant to Canadian post-secondary institutions to help pay the indirect costs of research (e.g., salaries for research administrative staff, administrative costs associated with patent activities, maintenance of lab space). These annual grants are based on a formula related to tri-council award amounts (CIHR, NSERC, and SSHRC) and are paid to the research institutes based on a formal revenue sharing agreement. Due to how UBC is now reporting revenue precipitated by policy changes of the CAUBO (Canadian Association of University Business Officers), PHSA includes revenue related to the Research Support Fund program.</p> <p><i>[RISe annual file provided by UBC Office of Research Services]</i></p>
Metric 3a - # of intellectual property disclosures, patents by program/research entity	<p>Total number of Invention Disclosure (internal documents), provisional patent and PCT applications by fiscal year.</p> <p><i>[BCTDO (for BC Cancer) and UILO (all other programs) complete the excel data collection form]</i></p>
Metric 3b – Licenses, royalty income and # spin-off companies (Revised FY 10/11) (Revised Net Licensing Rev definitions in FY 2013-14)	<p>Total number of active license/assignment agreements and spin-off companies. List the names of all active spin-off companies. These numbers represent cumulative totals from year to year and are no longer reported by region.</p> <p>IP related revenue shall follow the UILO (University-Industry Liaison Office) definitions from FY 2010-11 forward.</p> <p>Definitions:</p> <p>Gross licensing revenue = Royalties + Equity Liquidated + Option Fees + License Fees + License Management + Technology Assignment.</p> <p>Royalties - royalty payments including minimum annual royalty payments</p> <p>License Fees – upfront payments, milestone payments and other payments associated with the license</p> <p>License Management - legal fees incurred by TDO (Technology Development Office) or UILO relating to the licensed IP and reimbursed by licensees</p> <p>Total TDO Expenses for patenting and legal costs</p> <p>Expenses for Licensed IP – patenting, legal and related costs associated with licensed IP</p> <p>Realized revenue per distribution agreements – revenue accrued to PHSA program after distribution to inventors, obligations due to affiliated academic institutions, granting agencies and inventor departments.</p> <p>The revenue distribution varies by entity and will be noted in the narrative.</p> <p><u>Royalty, equity liquidated and licensee fees</u></p> <p>When the UILO licenses technology to a company, the terms of the license typically include a requirement to pay a % royalty on product sales, an upfront license fee and an annual license maintenance fee. The UILO may also negotiate an equity component (company stock) as part of the license agreement. Under the licensing scenario, the University still owns the technology but is granting a license to a third party.</p> <p><u>Option Fees</u></p> <p>This relates to the scenario when a company desires an option on a technology (essentially reserving/holding the technology). These are usually short-term contracts that have a modest option fee.</p>

TERM	DESCRIPTION [DATA SOURCE]
	<p>Technology Assignment</p> <p>This relates to the scenario when a company wishes to take ownership of the technology and in return pays an Assignment fee.</p> <p><i>[BCTDO (for BC Cancer) and UILO (all other programs) complete the excel data collection form]</i></p>
<p>Metric 4a – Clinical Trials Source: Ethics Module for all REBs</p>	<p>Number of active trials and cumulative subject enrollment at the end of the year. Includes CT data for all PHSA and non-PHSA PIs using PHSA facilities and resources</p>
FUNDING TYPE CATEGORIES (COLUMNS)	
Funding Types/Grant Types	The columns on worksheet 1ab, 2b that correspond to the funding types agreed to by the Research Metrics Working Group on July 22, 2009 and revised at the working group's direction in subsequent fiscal years.
SALARY AWARDS	
Faculty and other personnel support	Dollar amount for FY for supported faculty salary awards including chairs.
Trainee salary support	Dollar amount for FY for supported trainee salary awards including trainee research allowances.
INFRASTRUCTURE AWARDS	
Human Resources	Dollar amount for FY for Human Resource Infrastructure including Michael Smith Foundation for Health Research (MSFHR) - team start-up, team, research units, platforms, networks and institutional infrastructure, CFI Infrastructure Operating Fund (IOF) awards.
Capital, Equipment, Construction	Dollar amount for FY for capital, equipment, or construction awards including BC Knowledge Development Fund (BCKDF), matched sources (charities, industry) and other large equipment grants. Excluded are Canada Foundation for Innovation (CFI) awards (see next category).
Capital, Equipment, Construction - Major CFI (Added in FY 10-11)	Dollar amount for FY for capital, equipment, or construction Major Canada Foundation for Innovation (CFI) awards for Leading Edge Fund (LEF)/New Initiatives Fund (NIF) awards. Also included in these amounts are the matching funds (industry, educational, charity, etc.) to these awards. Excluded are \$'s associated with the Infrastructure Operating Fund (IOF) or Leaders Opportunity Fund (LOF) from DFI. These get reported under Infrastructure - HR and Operating Grant categories respectively. (see Metric definition 2d for further detail)
OPERATING GRANTS	
Operating or Project Operating Grants (not exclusive of the next three columns)	Dollar amount for FY for operating or project operating grants including when the salary component is embedded in a grant; includes establishment grants; includes development grants.
Clinical Trials (4a) (Definition clarified in FY 10-11)	Dollar amount for FY for any research project that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes. Health related interventions include any intervention used to modify a biomedical or health-related outcome, for example drugs, surgical procedures, devices, behavioral treatments, dietary interventions, and process-of-care changes. Health outcomes include any biomedical or health related measures obtained in patients or participants, including pharmacokinetic measures and adverse events.
Clinical Trials (4a) (Definition clarified in FY 10-11)	Dollar amount for FY for research involving a new laboratory technique or process, e.g., a new more cost-effective processing for a genetic diagnostic test, or a new

TERM	DESCRIPTION [DATA SOURCE]
	tissue preparation process, etc. Trials that may use clinical material but do not directly involve patients in the research or involve a risk to the patients (may involve their tissue or blood samples however).
Grant in Aid	<p>Dollar amount for FY for Grant-in-aid awards (Broad topic but not directed).</p> <p>A Grant-in-Aid is essentially a donation to one or more researchers, normally to conduct research in an area that is of mutual interest to both the donor and the researcher(s). These grants are normally in the form of a one-page letter addressed to a researcher and signed by the donor and accompanied by the grant funds.</p> <p>Characteristics:</p> <ul style="list-style-type: none"> • Sponsor supports research activities of an individual researcher or group of researchers. Sponsor does not restrict use of funds • Funds are paid in advance • No invoicing or financial statements are required by Sponsor • University/Host Institution retains all rights to inventions and other intellectual property • University/Host Institution is free to publish results • University/Host Institution provides the Sponsor with a final report only • Parties to the Agreement: University/Host Institution and Sponsor (may include University/Host Institution Affiliated Hospitals)
Other Funding Type – Service Contracts Added as sub-type of Other Funding Type category in FY2010-11; Combined into one “Other” category as of FY 14-15	Characteristics: (1) Solely for testing, evaluation or analysis of materials or compounds owned by the Sponsor with no intellectual input or value-added by UBC. (2) Sponsor retains all rights to intellectual property provided by the Sponsor for the services
Other Funding Type – Donations & Endowment Interest Added as sub-type of Other Funding Type category in FY2010-11; Combined into one “Other” category as of FY 14-15	<p>A donation is a gift given by an individual or an organization to a non-profit organization, charity, or private foundation in support of a specific purpose.</p> <p>Endowment – gift of money or income producing property to a public organization (such as a hospital foundation or university) for a specific purpose (such as research or scholarships). Generally, the endowed asset is kept intact and only the income (known as endowment interest) generated by it is consumed.</p>
Other Funding Type Combined into one “Other” category as of FY 14-15	Dollar amount for FY, combined, of any grant, award or contract that does not fit into the above categories. Please specify name of Funding Type in space provided.
FUNDING SOURCE CATEGORIES (ROWS)	
UBC RISE Sector	<p>Sector denotes an area of the economy in which the funder is assigned. This decision is based on how the organization is funded. Three sectors are currently utilized by UBC’s Research Information System (RISe) and include:</p> <p>Non-Profit – funding provided mostly by private donations and endowments.</p> <p>Industry – funding provided by a for-profit business in the private or commercial sectors of business.</p> <p>Government – funding provided by local, provincial, national, federal, or foreign government entity. [definitions to be further developed with input from Working Group and RISe personnel]</p>

TERM	DESCRIPTION [DATA SOURCE]
Funding Sources/Granting Program	The rows on worksheet 1ab, 2b that correspond to the funding sources agreed to by the Research Metrics Working Group on July 22, 2009 and modified in subsequent fiscal years.
CIHR and its institutes (included in Major Canadian Funding Category)	The Canadian Institutes of Health Research and its thirteen subsidiary institutes: <ul style="list-style-type: none"> * Aboriginal Peoples' Health * Aging * Cancer Research * Circulatory and Respiratory Health * Gender and Health * Genetics * Health Services and Policy Research * Human Development, Child and Youth Health * Infection and Immunity * Musculoskeletal Health and Arthritis * Neurosciences, Mental Health and Addiction * Nutrition, Metabolism and Diabetes * Population and Public Health
CCSRI (formerly NCIC/Canadian Cancer Society/CCSR) – (name changed to CCSRI for FY 11-12 and moved to CDN Foundation & Non-profit category)	On February 1, 2009, the Canadian Cancer Society integrated the operations of the National Cancer Institute of Canada (NCIC), creating the Canadian Cancer Society Research Institute. Grants from all three of these organizations should go in this category.
NSERC (included in Major Canadian Funding Category)	Natural Sciences and Engineering Research Council
SSHRC (included in Major Canadian Funding Category)	Social Sciences and Humanities Research Council
Genome Canada and provincial Genome agencies (included in Major Canadian Funding Category)	Genome Canada, and its regional centres: Genome BC, Genome Alberta, Ontario Genomics Institute, Genome Quebec, Genome Prairie, and Genome Atlantic
MSFHR (included in Major Canadian Funding Category)	Michael Smith Foundation for Health Research (BC)
Canadian Industry	Canadian-based for-profit corporations. Decisions on whether a funding source is Canadian or Foreign are driven by award payment or contract address.
Canadian Foundations & Non-Profits (name modified in FY 12-13 to align with UBC categories – all historical data was recoded)	Canadian not for profit organizations including foundations and charities. These include grants that are “internally” sourced (i.e., that are from BCCHR, BCCRI or their affiliated Foundations such as BCWF, BCCHF, and BCCF etc.)
Canadian Educational Institution	This was added in FY 09-10 as a separate Funding Source Category and includes all educational and/or academic institutions in Canada. Foreign Educational Institutions are categorized under Foreign Other Source.
Canadian Government	Provincial, municipal, territorial, or federal governments and crown corporations in Canada
Foreign Industry	For-profit corporations outside Canada. Decisions on whether a funding source is Canadian or Foreign are driven by award payment or contract address.

TERM	DESCRIPTION [DATA SOURCE]
Foreign Foundations & Non-Profits (name modified in FY 12-13 to align with UBC categories – all historical data was recoded)	Not for profit organizations including foundations and charities headquartered outside Canada, e.g., March of Dimes, American Cancer Society
Foreign Government	Provincial, municipal, territorial, or federal governments and government-controlled corporations outside Canada including the armed forces (e.g., US Military)
Foreign Other Source	All Foreign funding sources not captured in the above Foreign categories including Foreign Educational Institutions.
CLINICAL TRIAL GRANT FUNDING TYPES	
Source of funds refers to the funder, sponsor, grantor, or agency (government, industry, and non-profit) that is providing the funds needed to undertake the project. Projects are not considered “For-Profit” if a sponsor is only collaborating and not funding the study (e.g., providing study drug or lab space only).	
Grant	Funding provided for specific projects by sponsors in the government or non-profit sectors.
For-Profit Sponsor (Industry or Pharmaceutical)	Funding provided for specific projects by sponsors in the industry sector.
Grant-in-aid	Funding provided for general research activities by sponsors in any sector (Industry, Government or Non-profit)
Internal Funding	Funded by internal program department, program operational budget or non-profit foundation (e.g., salary award)
No Funding	No funding provided.
Other	Funding not yet known when ethics application was submitted.
Multiple Funding Type	Any combination of the above funding types.
RESEARCH TRAINEES’ CATEGORIES (COLUMNS)	
Research Trainee	Total number of research trainees by student type excluding clinical trainees who are supported during their brief research rotations. Research trainees counted will be any individuals who are primarily supervised by a researcher affiliated with the reporting unit, during all or a portion of the reporting year.
Masters	Graduate students enrolled in a full time master’s program who are supervised by a faculty member affiliated with the reporting organization.
Doctoral (changed from PhD in FY 2010-11)	Graduate students enrolled in a full time PhD program who are supervised by a faculty member affiliated with the reporting organization.
Post-doctoral	Full time post-doctoral fellows whose primary focus is research (NOT clinical fellows)
Summer students (short term)	High school and or university students who are engaged in a short-term program with the reporting program for a limited period (e.g., over the summer, a few weeks)
Residents	MDs engaged in a residency program that may include a research rotation
Practicum, co-op, honors and directed studies students	High school and/or university students whose assignment to the reporting organization is according to a practicum, co-op, honours and/or directed studies program
Other Research Trainee Type	(Reporting organization to specify definition)
RESEARCH TRAINEES (ROWS)	
Do you Support These Types of Research Trainees	To be answered Yes or No for each Research Trainee Category listed above. Is used to indicate that a research entity does have Research Trainees of this type but has no data collection ability. This will distinguish between those with zero (0) Trainee types from those that have them but can’t count them.

TERM	DESCRIPTION [DATA SOURCE]
Total Head Count	Total number of research trainees of that type, not an FTE (Full Time Equivalent number).
LIST OF RESEARCHER NAME (COLUMNS AND ROW)	
<p>Category (modified to add Shared Membership sub-category under BCCHR categories 1-3 in FY 2010-11) Membership categories revised FY 16-17</p>	<p>A number one through five (MUST have one selected). Categories 1-4 are as described in the BCCHR “Guide for Completing an Application for Membership” available online at http://www.cfri.ca/research_support/forms/membership.asp. These categories are based on a calculation of a given individual’s research hours/week.</p> <p>Category 5 will be for those research entities/programs who do not utilize the CFRI categories. If you utilize category 5, please indicate the definition that your research entity/program uses to define Researchers.</p> <p>A shared membership sub-category available in CFRI Categories 1-3 was added in FY 2010-11. This new category allows individuals to formally declare their alignments (including percentage affiliation) with more than one organization. Category 4 was clarified to include only affiliate investigators that are not based on site but who collaborate with program members. Their primary affiliation will be with another academic and/or research institution.</p> <p>New categories for FY 16-17: http://bcchr.ca/research-support/membership</p>
First, Last, Middle name	Self-explanatory, e.g., Jane Mary Smith
Short Name	Name as it would appear in PubMed, for example, Smith, JM
Count Attributed to Program Added in FY 11-12	An indication by number (1 or .5) of whether a researcher is attributable to applicable program 100% (full) or 50% (shared).
UBC’s definition of Research Added in FY 13-14	<p>UBC defines research involving human subjects as “any systematic investigation (including pilot studies, exploratory studies, and course-based assignments) to establish facts, principles or generalizable knowledge which involves living human subjects; or human remains, cadavers, tissues, biological fluids, embryos or fetuses.” It does not include...” quality assurance studies, performance reviews or testing within normal educational requirements, or activities undertaken for administrative or operational reasons...” unless they include an ‘element of research.’</p>
OTHER	
Fiscal Year	Includes data for April 1 - March 31 of applicable fiscal year (i.e., FY 14-15 is April 1, 2-14 – March 31, 2015)