



Annual Report

2020-

2021

Letter of Transmittal from the Minister

His Honour, the Honourable Russ Mirasty, Lieutenant Governor of Saskatchewan

May it Please Your Honour:

I respectfully submit the annual report of Saskatchewan Health Research Foundation for the fiscal year ending March 31, 2021.



Honourable Jeremy Harrison
Minister Responsible for Innovation



Letter of Transmittal from the Board Chair

The Honourable Jeremy Harrison, Minister Responsible for Innovation

Dear Minister:

I am pleased to submit for your consideration the annual report of Saskatchewan Health Research Foundation for the fiscal year period April 1, 2020, to March 31, 2021.

Respectfully submitted,



Joe Vidal
Board Chair



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SHRF receives funding from the
Government of Saskatchewan
through Innovation Saskatchewan.

Who We Are

SHRF funds, supports, and promotes health research that matters to Saskatchewan.

Health research is vital to finding solutions to complex health challenges. SHRF's work is vital to support the best health research aligned with the needs of our province. Our work includes upholding a rigorous peer review process, measuring and sharing the impact of funded research, and collaborating with partners who help maximize the impact of the work.

Our strategic goals are to:

- Strengthen research capacity and competitiveness
- Increase investment in research and innovation
- Align research with stakeholders' needs

Learn more at shrf.ca/About

MESSAGE FROM OUR LEADERS

Investment in health research is by the very nature of it, a long-term investment. This past year reminds us all why these investments are needed.

Research has played a vital role in the fight against the global pandemic. From the development of vaccines; to detection and treatment for COVID-19; to finding innovative ways to support the health and well-being of the general population; to finding better ways to deal with mental health challenges as we all face disruptions to our daily lives – health research has been vital to it all.

As a funder of health research in these days of COVID-19, we have leaned on one of our core values of adaptability. This has allowed us to redirect some of our investments to support research teams and community organizations dealing with mental health issues; translating resources into different languages for Indigenous and newcomer communities; developing online programming and community connections; developing resources to stay healthy and active; and creating tools to support various health care workers, from nurses and paramedics to dentists.

Our ability to quickly adapt and align research support with the needs of our province was possible because of the unique position we hold within Saskatchewan’s research ecosystem. Our established expertise in managing funding competitions and our relationships with local and national partners meant we were able to maximize the benefit of research investments, reduce duplication and increase the impact of health research and other activities geared toward improving the health of our province.

Our values of accountability, excellence and integrity have served us well this past year, however we also know it is our responsibility to work with our partners and stakeholders to ensure that we meet the new challenges we will face post-pandemic. Our provincial and national partners (i.e. Lung Association of



Our values of accountability, excellence and integrity have served us well this past year, however we also know it is our responsibility to work with our partners and stakeholders to ensure that we meet the new challenges we will face post-pandemic.

Saskatchewan; Alzheimer’s Society of Saskatchewan; Health and Stroke Foundation, Centre on Aging and Brain Health Innovations, Mental Health Research Canada, the Canadian Institutes of Health Research and many more) will help us meet our strategic goals and meet the health challenges magnified by the global pandemic.

This year we were proud to launch a new program that allows us to be even more responsive to the needs of the province. Our Solutions Program aims to mobilize the research community and its partners to focus and coordinate their diverse skills and perspectives to propose, implement and test “solutions” to address current Saskatchewan health challenges. For example, the first competition, that focused on virtual care, resulted in an investment of over \$1M in 14 teams who will develop, implement, and evaluate solutions with the potential to connect patients to the care they need, when and where they need it.

This has been a challenging year for everyone. We would like to thank the SHRF staff for their energy, engagement and incredible work developing and implementing new processes and programs over the past year to respond to the needs of our researchers, partners, stakeholders and government. Thank you to our Board of Directors for their bold guidance and unwavering support. And thank you to Innovation Saskatchewan and the Government of Saskatchewan for the trust you place in SHRF to invest in relevant, impactful health research.

SHRF will continue to invest in relevant research, measure and evaluate the impact of these research investments; strengthen and expand our collaborations and partnerships, all with the goal of aligning with the needs of Saskatchewan and its communities.



Joe Vidal
SHRF Board Chair



Patrick Odnokon
SHRF CEO

Board of Directors

Joe Vidal (4) Board Chair	Phoebe De Ciman (2)
Vivian Ramsden (4) Vice Chair	Tami Denomie (3) Jordan Dutchak (4)
Jane Alcorn (4)	Danya Kordan (4)
Rachelle Ashcroft (4) (Appointed April 22, 2020)	Jeff Wandzura (4) (Appointed April 22, 2020)
Josef Buttigieg (4)	Brandy Winquist (3.5)

Number in brackets denotes number of board meetings attended.

SHRF Team

Patrick Odnokon
Chief Executive Officer

Catherine Klopoushak
Corporate and Operations Administrator

Rostyk Hursky
Director of Impact and Strategy

Karen Tilsley
Director of Programs and Partnerships
(ON LEAVE until January 2022)

Cara Spence
Director of Programs and Partnerships (INTERIM)

Dani Robertson-Boersma
Programs and Peer Review Manager
(ON LEAVE until May 2022)

Chelsea Cunningham
Programs and Peer Review Manager (INTERIM)

Tanya Skorobohach
Programs and Peer Review Coordinator

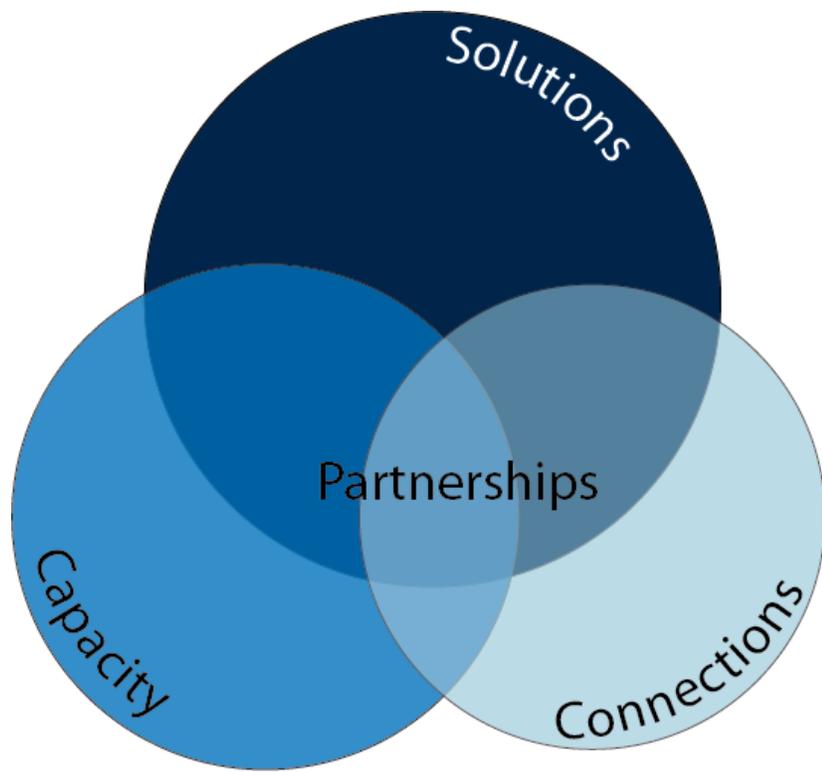
Lina Kazan
Director of Finance and Corporate Services

Irene Blum
Senior Accountant
(RETIRED January 2021)

Daniel Ramirez Nava
Accountant
(STARTED October 2020)

Nikki Desjardins
Engagement Specialist

FUNDING PROGRAMS



SHRF's investments strengthen research **capacity** and competitiveness; advance local **solutions** to complex health challenges; and enable **connections** between stakeholders to contribute to and/or mobilize health research knowledge. With everything we do, we engage local and national **partners** to align research with the needs of the province and increase the investment in quality research that leads to better health care and healthier communities.

In 2019, we began the process of refreshing our funding programs to better align with our strategic plan and the needs of our stakeholders. Since then, a global pandemic was declared. Sticking to our core value of adaptability, we responded to meet the rapid needs of the research community with support that would help tackle the health challenges we faced as the province took on measures to flatten the curve.

At the same time, leaning on our core value of accountability, we continued to shape how we will meet the ongoing needs of our province with our suite of funding programs. Developed in response to our engagement with the research community, partners and other stakeholders and in line with our strategic plan and Board direction, the 2020-21 year saw the launch of the new Solutions program, the continuation of our Establishment grant and our Research Connections funding opportunities and new and strengthened partnerships to support Saskatchewan health research.

2020-21 PROGRAMS OVERVIEW

SHRF develops and executes research funding competitions that allow us to invest in collaborative, innovative, high-impact, peer-reviewed health research that is relevant to improving the health of Saskatchewan people.

Capacity	Establishment Grant	Up to \$120,000 for a three-year term
	Assists researchers who are new or newly resident in Saskatchewan in establishing an independent program of health research in the province and achieve the research productivity necessary to obtain major funding from national and other external agencies.	
21 Applications Received 10 Grants Awarded \$1,180,089 invested by SHRF		
Solutions	Innovation Grant	Up to \$50,000 for one year
	Impact Grant	Up to \$150,000 for two years
Aims to mobilize the research community and its partners to focus and coordinate their diverse skills and perspectives to address timely Saskatchewan health challenges.		
27 Applications Received 14 Grants Awarded \$1,062,369 invested by SHRF and Alzheimer Society of Saskatchewan		
Connections	Research Connections	Up to \$10,000 for one year
	Facilitates the sharing, use and integration of existing health research knowledge in a way that rapidly responds to the situation faced by Saskatchewan communities, leading to informed decision making; a more knowledgeable and prepared public; increased knowledge or resources for front line or essential services.	
41 Applications Received 29 Grants Awarded \$251,070 invested by SHRF		
Partnerships	Partnership Grants	Varying amounts and terms depending on the partner
	Contributes to local and national partner funding opportunities to increase the investment in research and innovation in SK, while strengthening researchers' capacity and competitiveness and aligning our investments with the needs of the province.	
14 Grants Administered and Awarded by Partners \$517,919 invested by SHRF		

For a list of all funding recipients, see pages 21 to 27.

Over \$1M Invested to Support Virtual Care Solutions

With the strain of the pandemic weighing on many aspects of the health system and how people have been able to access care over the past year, SHRF has invested a total of over \$1M to support interdisciplinary research teams to develop, implement and evaluate virtual care approaches to many of the health challenges our province faces.

The grants were awarded as part of SHRF's new Solutions Program that aims to mobilize the research community and its partners to focus and coordinate their diverse skills and perspectives to address timely Saskatchewan health challenges.

"These research teams are taking innovative approaches to applying technology as a solution for the unprecedented health challenges presented by the pandemic," says Minister Jeremy Harrison, Minister Responsible for Innovation Saskatchewan.

"This work will also have an impact and continue to serve the people of Saskatchewan beyond the pandemic and that is the true value of this investment."

- Minister Harrison

Caregiving for family members with dementia

A pair of Solutions Innovation projects jointly funded by SHRF and the Alzheimer Society of Saskatchewan are exploring ways to harness the power of the internet to deliver culturally safe support to Indigenous caregivers.

Culturally safe caregiver support groups for caregivers of Indigenous people living with dementia

This project, led by Megan O'Connell, will test whether providing caregivers with access to virtual, monthly support group sessions improves their ability to cope with the stresses of caring for a loved one with dementia. Because caregivers of people with dementia are themselves at increased risk of dementia, reducing the mental and physical stress from this demanding role can protect them from developing the condition.

While specific topics for discussion will be determined by participants, sessions will likely include information about dementia and how it advances, factors that increase risk of developing dementia and those that protect against the disease, and strategies to help caregivers cope with caring for a loved one with the condition. Through the sessions, the researchers hope to get a better sense of the impact caregiving is having on the participants and what supports -- including information -- they need.

Engaging caregivers of persons with dementia in the virtual delivery of and access to health information and services

The second project, being led by Dr. Gary Groot and Dr. Cari McIlduff, is exploring whether providing caregivers with access to a "toolkit" of online resources - including touchscreen tablets and small wireless routers that serve as a mobile wi-fi hotspot - makes them better equipped to care for their family members and to attend to their own mental and physical wellbeing.

Through this project, McIlduff and colleagues hope to gain a clearer picture of the kinds of resources and supports that Indigenous caregivers find most useful, and the extent to which accessing them virtually reduces stress for caregivers.

Alzheimer Society
S A S K A T C H E W A N

SUPPORTING SK PEOPLE

288

People were employed within SHRF-funded projects as reported in annual or final reports for the 2020-21 year

ENCOURAGING COLLABORATION

327

Individuals were involved as team members or contributors in newly funded projects in 2020-21

INVESTMENT OVERVIEW

Capacity

i.e. Establishment Grant and Research Fellowship Top Up (SHRF contribution)

\$1,190,089

Solutions

i.e. Impact and Innovation Grants (SHRF contribution + Partner contribution)

\$1,062,369

Connections

i.e. Research Connections (SHRF contribution)

\$251,070

Partnerships

i.e. Partnership Grants administered by our partners (Co-funded SHRF contribution + Partner contributions)

\$1,969,642

THE IMPACT OF ESTABLISHMENT GRANTS 5 YEARS LATER

Driven by our core value of accountability, SHRF measures the impact of the work we do in many ways. One way is by measuring the impact of our investments through the required reporting when researchers receive SHRF funding.

For our Establishment grant program, that includes a five-year follow up report that considers how SHRF-funding at the early stages of a program of research has impacted the trajectory of further funding and other outcomes.

From the 2015-16 cohort, nine funding recipients submitted their 5-year follow-up report. They reported the following in subsequent funding that would not have been possible without SHRF's initial investment:



SHRF's Initial Investment

\$1,031,553

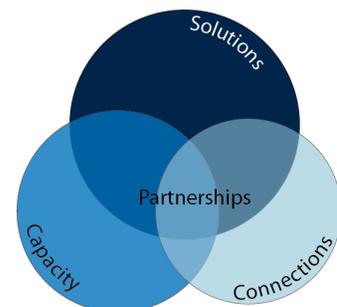
Subsequent Funding Received

\$8,239,147

TOTAL INVESTMENT

SHRF and Partner contributions committed to newly awarded health research initiatives in SK in 2020-21

\$4,473,170



SHRF Supports Saskatchewan COVID-19 Research with Targeted Funding and Partnerships

In the early days of the pandemic, SHRF launched a targeted knowledge mobilization funding opportunity, through our Research Connections program. This funding facilitated the sharing, use and integration of existing health research knowledge in a way that rapidly responded to the situation faced by Saskatchewan communities, leading to informed decision making, a more knowledgeable and prepared public, and increased knowledge or resources for front line or essential services. We were able to support projects that:

- Translated COVID-19 resources and facts into plain language; 9+ languages; comics; videos; evidence-based clinical guidelines; and more;
- Addressed the individual needs of those struggling with mental health; the needs of those working and living in long-term care homes; and the needs of those most vulnerable in Saskatchewan, such as seniors and children in care; and
- Found ways to keep people active, connected and healthy in virtual settings by turning to technology to deliver information and training for new situations faced in the pandemic.

SHRF also partnered on other national and provincial funding opportunities which helped connect our local expertise to networks across Canada and internationally, to support projects that:

- Developed new tools for detecting co-infections with COVID-19;
- Captured insights from the front lines of care to improve pandemic responses in the future;
- Allowed Saskatchewan patients to access global clinical trials; and more.

“I am proud of the way our Saskatchewan research community and their partners have responded and contributed to the local and global fight against this pandemic,” says SHRF CEO, Patrick Odnokon. “Health research will continue to play a vital role in seeing us through this pandemic.”

The following pages include an overview of investments and abridged stories highlighting some of the projects supported this past year. To read the full text and see more, visit shrf.ca/Stories.

See a listing of projects starting on page 23.

2020-21 COVID-19 INVESTMENTS

SHRF invested over

\$250,000

in 29 projects

through our Research Connections:
COVID-19 Rapid Response

SHRF supported

**12 SK researchers
and teams**

with over \$450,000

in partnership programs that also saw
a contribution of over

\$1.2M

in partnership funding

In total, SHRF and our partners invested

almost \$2M

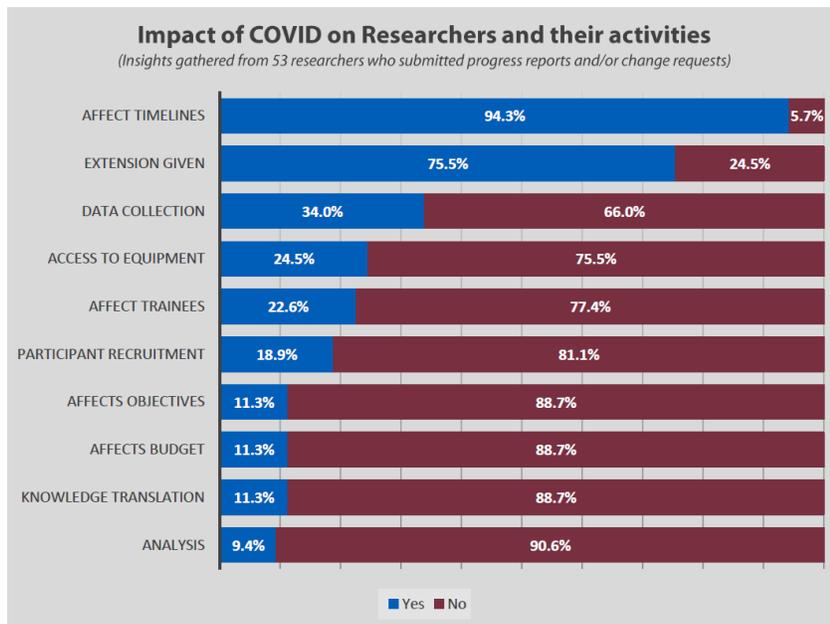
in COVID-19 related research in SK in 2020-21

SHRF is committed to supporting
SK COVID-19 and related research
now and beyond the pandemic.



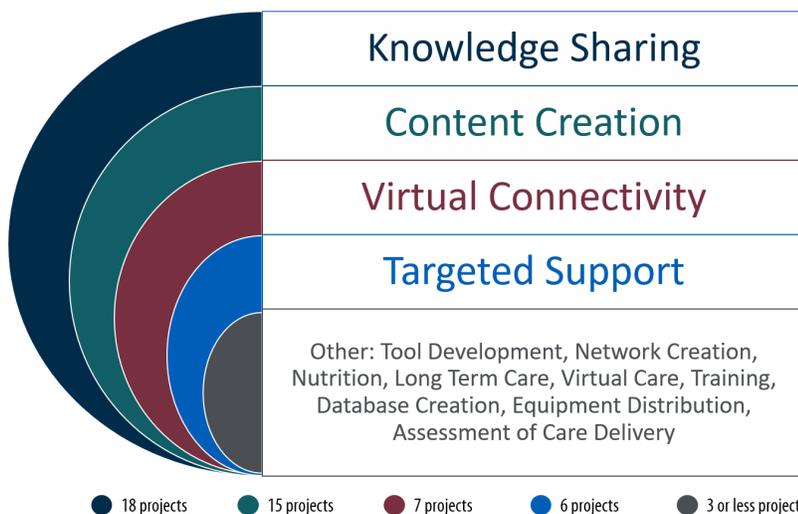
Impact of COVID on Saskatchewan Researchers and Activities

As part of our research funding, recipients are required to submit reports to SHRF so that we remain accountable for our investments. These reports tell us about the progress and impacts of the research we fund. As the world faced a pandemic, our funded researchers faced profound delays and challenges to completing their research activities as planned. However, many have shown adaptability and are continuing on the path of discoveries for improved health. Below is a quick overview of what we heard from Saskatchewan researchers.



Research Connections: COVID-19 Rapid Response Funding Project Impact Areas

In the early days of the pandemic, SHRF launched a targeted knowledge mobilization funding opportunity to facilitate the sharing, use and integration of existing health research knowledge in a way that would help Saskatchewan face the challenges presented by the pandemic. Below is a summary of the project impact areas.



SK researchers to assess the impact of COVID-19 on kids and families

An increasing number of studies are examining the impact of COVID-19 on the mental health of adult Canadians, but little is being done to assess its impact on children and youth. A new study was awarded \$50,000, co-funded by Mental Health Research Canada and SHRF to fill this knowledge gap.

The study, co-led by Dr. Nazeem Muhajarine, professor of Community Health and Epidemiology at the University of Saskatchewan, and Dr. Tamara Hinz, child and adolescent psychiatrist with Saskatchewan Health Authority, will measure the frequency and severity of mental health issues among Saskatchewan's children and youth (ages 5 to 19) during the pandemic, as well as their need, use and satisfaction with mental health services. Data will be collected three different times between February and July 2021 to track changes over the course of the pandemic and school year. The goal of this study is to provide useful data to enhance mental health services to children and youth, and support families in Saskatchewan.



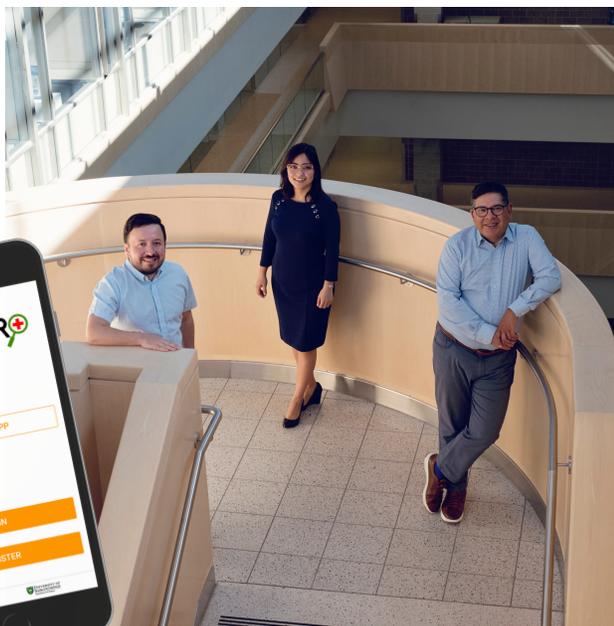
Real-Time Solutions

How an interactive app is helping SK surgeons face the pandemic

During a pandemic, a physician's biggest risk is exposure. Exposure can result in a loss of manpower, health service disruptions or even a need to close a health care facility. Protocols and procedures help mitigate this risk, but how do physicians stay on top of the latest updates to keep themselves and their patients safe?

A collaborative research team has come up with a solution through the development of a mobile application for surgeons across Saskatchewan. The app, called Inventory, tracks manpower; updates algorithms in real-time to guide procedural decision-making; and provides information about areas of increased COVID activity in the province.

"We designed the app to face this pandemic, however, Inventory is adaptable, connecting doctors to the information they need, when they need it to face future situations," says Samaniego. "This is the power of communication in real time."



The team: Christian Spana - CEO AllpaTech; Mayra Samaniego and Dr. Ivar Mendez - University of Saskatchewan



Virtual Reality Training Keeps SK Paramedics Safe During Pandemic

Prior to March 2020 Saskatchewan's 2,000 paramedics rarely needed to gear up with full personal protective equipment (PPE), a practice usually reserved for hospital staff treating patients in isolation. With the onset of the COVID-19 pandemic though, it suddenly became critical.

Jacquie Messer-Lepage, registrar of the Saskatchewan College of Paramedics (SCOP) says the pandemic heightened awareness of the risks involved in providing emergency care. "Pre-COVID, things like doing CPR would not have been considered a high risk aerosol-producing activity," she said.

With the support of a rapid response grant from SHRF, the College of Paramedics was able to team up with Saskatoon company Luxsonic Technologies to create two "immersive" videos.

"You can tell people that they need to make sure to sanitize their hands in between each step (when donning/doffing PPE), but actually seeing the person take the time to do the activity -- it triggers something in your own mind," said Messer-Lepage. "For our practitioners, seeing these videos, being able to kind of be in the middle of it, it becomes an experience, as opposed to an academic lecture."^{**}

^{**}Story written for SHRF by Greg Basky

New Knowledge in Real Time

Since February 2020, Dr. Gordon Asmundson, along with colleague Dr. Steven Taylor, and their team have been running the academic equivalent of an ultramarathon. Asmundson estimates that he's published close to 30 papers, when the average in academia and clinical psychology, he says, is closer to two or three a year. Those publications are based on rigorous science and draw upon the wealth of data they've generated through four waves of surveys involving 7,000 Canadians and Americans.

Of the wealth of new information he and Taylor are generating and sharing via their coronaphobia.org website (developed with support from the U of R and SHRF), Asmundson is particularly gratified by the COVID Stress Scales they developed as a tool for researchers and clinicians to use with patients.

The five interrelated scales correspond with the complex constellation of five emotional responses and behaviours the pair has labelled COVID Stress Syndrome—a condition that up to 16 per cent of the North American population may be experiencing to such a degree that it impairs their ability to function normally. Their finding paints a far more nuanced picture of people's distress around viruses.*

Connecting Coronaviruses in Bats and the COV3R Project

Dr. Andrew Cameron and his research team are part of the \$430,000 COVID-19 Rapid Regional Response (COV3R) project funded by Genome Prairie and SHRF. Working with the provincial labs in Saskatchewan, Manitoba, and BC, Cameron and his colleagues are using genomic techniques to spot and study variations in the coronavirus and to identify coinfections in western Canadians who test positive for COVID.

For several years prior to the COVID-19 pandemic, Cameron had been gearing up to study viral diversity in animals, trying to understand which viruses had the potential to jump from animals to humans. When "virus hunter" colleagues found several coronaviruses in bats from the Democratic Republic of Congo (DRC) that didn't match previously identified coronaviruses, Cameron quickly requested that samples be sent to the U of R lab. In 2019, the scientific world didn't know much about coronavirus diversity. "It's a big group of viruses, but very little research had been done on it outside of SARS and MERS," says Cameron.

He and his team were eager to use a technique called probe capture to isolate and map the virus's genetic material. The team wanted to find out more about coronaviruses in bats and how their genes compared to other known coronaviruses. After most of 2019 was spent sorting out paperwork and shipping arrangements, the samples from the DRC bats arrived at Cameron's lab in December 2019, only a month before news of the troubling new virus began to dominate headlines and newscasts.

When the federal government made funding available for researchers to pursue a variety of different approaches to understanding the emerging pandemic, Cameron and his team were well positioned to move quickly. "We'd already been thinking about coronaviruses and diversity and different ways to isolate their genetic material to sequence their genomes."*



*Story written for SHRF by Greg Basky



Implementation Science in Long-Term Care

Gloria Evans sees the impact the pandemic is having on the spirits of her mother, who lives in an assisted living facility in Regina. “She’s said many times that she just wants somebody to listen to her, or to visit with.” Public health orders required facilities to eliminate in-person visits from family members and friends. Evidence is emerging though that the same policies put in place to keep residents and staff physically safe have brought unintended harm to residents’ mental health, through increased feelings of separation and social isolation.

A new project in a handful of care homes in Saskatchewan, Ontario, and New Brunswick will identify effective ways to safely reintegrate the people who play a critical role in both the physical and mental health of residents. The Canadian Foundation for Healthcare Improvement (CFHI) and the Canadian Patient Safety Institute (CPSI) defines these individuals as “essential care partners” in recognition of the key role they play in the well-being of residents.

Two Regina long-term care homes run by Eden Care Communities, are part of the project funded in this province by SHRF in partnership with CIHR. Eden Care staff are doing what they can within the confines of public health rules to address loneliness, but Bill Pratt, chief of relationships, research, and innovation, says “It’s still not the same as having those you love coming in to see you.”

Natasha Gallant, an Assistant Professor at the University of Regina, is project lead. She says local teams in each province will be iteratively testing a series of tools and strategies identified by CFHI for more closely involving essential care partners in long-term care. The project will use a research approach called implementation science, which aims to maximize the probability that a project’s findings are actually put into practice. The long-term care environments that have signed on have committed to implementing the tools and strategies they help develop.*

Digital Connection

Child therapy worker Alex Paiva and her colleagues at Child and Family Services of Western Manitoba didn’t know where to turn for information to continue carrying out their work under the new restrictions. COVID-19 also increased the risks of separation, isolation, and additional trauma for children, youth, and families involved with the child welfare system. “There were a lot of unknowns and a lot of uncertainty. Things were changing day by day, minute by minute, at the onset.”

It was this information gap that the University of Regina’s Nathalie Reid and Lise Milne sought to fill. The pair wanted to quickly get the latest evidence into the hands of people working with vulnerable members of society. With funding from SHRF and CIHR, Reid, Milne and their team have built the Digital Connections Hub, a website with resources designed for child-services professionals across the three prairie provinces.

The goal, says Reid, was condensing all of the evidence into practical tools. “Here are the practical suggestions; here are some actual scripts on how to speak to children about COVID-19. So, not just saying it’s important to do it, but also, here are some suggestions on how to do it.”*

*Story written for SHRF by Greg Basky

MORE PARTNERSHIPS



+ more

Working Together to Accomplish More

Strengthening relationships with our partners means we are enhancing the expertise of each organization and optimizing our ability to strengthen research capacity and competitiveness in the province.

Partnering with SHRF means we can diversify and maximize the use of our resources to grow our program offerings and invest in collaborative, innovative, high-impact, peer-reviewed health research. SHRF is uniquely positioned to understand the research environment and be able to align research with the needs of our stakeholders.

In 2020-21, though much of our partnership activities were targeting COVID-19 and the immediate needs of the province, we continued to strengthen and diversify our partnerships and plan for work that we will undertake in the future. We also celebrated the success of past activities, such as the 10-year impact of the SK Research Chair in Alzheimer's Disease and Related Dementia, supported in partnership with the Alzheimer Society of Saskatchewan.

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Building Capacity Through Partnership

In 2020-21, SHRF partnered with AGE-WELL to support a postdoctoral fellowship award. Cari McIlduff was awarded \$45,000 for her project that will engage urban Indigenous older adults with technology use to respond to health and wellbeing concerns and needs.

Partnering with organizations like AGE-WELL to support early career researchers is part of meeting our strategic goal of strengthening research capacity and competitiveness in SK and helping highly qualified personnel access training and mentorship opportunities.

Partnering to support innovative SK research that could be key to treatments and early detection of Parkinson's Disease

Chris Phenix, nuclear medicine researcher from the University of Saskatchewan, has been awarded US\$150,000 by The Michael J. Fox Foundation to develop diagnostic radiotracers for early detection of Parkinson's Disease, a chronic degenerative brain disorder that affects more than 100,000 Canadians.

"Any time you can get a grant that's this competitive, this prestigious, it shows off what we have at our university, and the world-class research that's being done here," said Phenix, an assistant professor in the chemistry department.

The Saskatchewan Health Research Foundation is contributing \$40,000 in matching support—invaluable additional funding that enables him to proceed with the project full steam ahead, said Phenix. The goal is to produce nuclear imaging agents that researchers can use to "peer into the living brain" to better understand Parkinson's Disease.

*Story contributed by USask

Dr. Chris Phenix
University of Saskatchewan
Nuclear medicine researcher
Photo by Kevin Appl for SHRF



A Decade of Impact for Alzheimer's Disease and Related Dementias

In 2020, the Alzheimer Society of Saskatchewan (ASOS) and SHRF marked their 10-year partnership to fund Dr. Darrell Mousseau as the Saskatchewan Research Chair in Alzheimer's Disease and Related Dementias.

"Funding research is critical to our vision and mission. When families are impacted by dementia, they want a diagnosis, they want to understand the disease so they can live well with dementia, following that they want a cure – not so much for themselves but for their children and grandchildren. Our partnership with SHRF and our donors to fund the Saskatchewan Research Chair has found additional pieces to help solve the Alzheimer's disease and dementia puzzle," says Joanne Bracken, ASOS CEO.

"Our partnership with ASOS was a first for SHRF and the Saskatchewan Research Chair program. It defined how SHRF and non-profits in the province could come together to support expertise and improve the impact of research for a particular health challenge. Darrell has not only been a success story for the Chair program, he has been an ambassador for SHRF and ASOS, and his work has been transformational in the area of Alzheimer's disease and dementia research," says Patrick Odnokon, SHRF CEO.

"Clearly the Saskatchewan Research Chair has been a major benefit to me, my research and the University of Saskatchewan, but what is most important is the impact of the research and the contributions we were able to make that will lead to future research findings," says Dr. Darrell Mousseau, University of Saskatchewan.

Alzheimer Society
SASKATCHEWAN

\$1 Million
\$100,000 per year
over 10 years

SHRF
SASKATCHEWAN
HEALTH RESEARCH
FOUNDATION

\$1 Million
\$100,000 per year
over 10 years

Infrastructure and support provided by **University of Saskatchewan**



\$4+ Million
Additional funding obtained
during the tenure of the
Saskatchewan Research Chair

Discoveries and Impacts

We have provided several reports that clearly show differences in the human male and female brain, and these differences speak to the potential for different disease processes between the sexes. Thus, there is likely no 'one size fits all' therapeutic for regulating amyloid levels in males and females and knowing this will help us to understand that we need to develop different therapeutics for each sex.

We have used our research funding to study phosphorylation on Tau protein that is a contributor to the Alzheimer's disease tangle pathology. We know that the expression of an enzyme that reduces the phosphorylation of many proteins and many pro-survival mechanisms within the cell is altered in the Alzheimer brain. We are the first research group to study the role of this enzyme in the context of Alzheimer's disease.

Our research has shown that not all A β peptides are bad: indeed, our brain generates a number of A β peptides of different length, and we have shown that shorter A β peptides can protect against the longer peptides found in the Alzheimer brain. Using a therapeutic that indiscriminately targets all A β peptides would have no clinical benefit as it would remove the bad A β s, but also the good A β s that are protective.

We know that there is increased risk of Alzheimer's disease associated with a class of antidepressant drugs that target the serotonin transporter. We can now show that these drugs block the removal of A β from the cells, and because a transporter is blocked this leads to the accumulation of A β within the cell.

Secondly, we have also shown that A β can bind irreversibly to an enzyme that is important for depression causing it to be more active and to trigger oxidative stress which starts the process to kill the cell. We have been able to design small peptides that can block this process. This could lead to a means of identifying Alzheimer's disease much earlier or could be modified to be used as a therapeutic.



Dr. Darrell Mousseau
SK Research Chair in Alzheimer's Disease
and Related Dementia

As the Saskatchewan Research Chair in Alzheimer's Disease and Related Dementias comes to an end, both organizations want to thank Dr. Mousseau for his efforts that have advanced our knowledge of the disease and provided the basis for future research.

Learn more at shrf.ca/Stories



2020 SANTÉ AWARDS

Though this year's event looked a little different than past years, the online event brought together Saskatchewan's health research community and SHRF partners to celebrate the impact of the work that is helping improve the health of Saskatchewan citizens, creating a high-performing health ecosystem and building a robust culture of research and innovation.

ACHIEVEMENT AWARD

This award is presented to an individual in health research whose exemplary career achievements have inspired us with their drive, leadership and ingenuity. Candidates are nominated by their peers and considered by an expert panel of national and local experts from a range of fields.

Dr. Carrie Bourassa

University of Saskatchewan and CIHR's Institute of Indigenous Peoples' Health

IMPACT AWARD

This award is presented to one researcher from our 2015-16 Establishment grant recipients in recognition of their contributions to building capacity, advancing health research knowledge, informing decision making and contributing to health and socioeconomic impacts. The award recognizes those individuals who are early in their careers but have had significant impact on health research and the health ecosystem with their efforts. This award is determined by a merit review committee.

Dr. Humphrey Fonge

College of Medicine
University of Saskatchewan

See more stories about the winners and view a recording of the event at shrf.ca/sante-awards.



Dr. Carrie Bourassa, 2020 Achievement Award Winner



Dr. Humphrey Fonge, 2020 Impact Award Winner

EXCELLENCE AWARDS

These awards recognize the top-ranked applications from researchers and teams in the past year's funding competitions. All applications to SHRF's funding competitions are ranked according to our rigorous peer review process by committees of active researchers and health professionals.

Dr. Walter Siqueira

College of Dentistry, University of Saskatchewan
Top Establishment Grant: Biomedical

Dr. Sarah Donkers

College of Medicine, University of Saskatchewan
Top Establishment Grant: Socio-Health

Drs. Yuliang Wu and John DeCoteau

College of Medicine, University of Saskatchewan
Top Collaborative Innovation Development Grant: Biomedical

Dr. Paulette Hunter

St. Thomas More
Top Collaborative Innovation Development Grant: Socio-Health

Dr. Bhanu Prasad

Saskatchewan Health Authority
Top Collaborative Innovation Development Grant: Clinical

Drs. Marta Erlandson and Corey Tomczak
College of Kinesiology, University of Saskatchewan,
and

Dr. Kristi Wright

Faculty of Arts, University of Regina
Top Sprout Grant

#Health Research WEEK

November 2 - 8, 2020

Health Research Week is an annual campaign to raise awareness for the important research, world-class researchers and collaborative efforts that exist in Saskatchewan and are contributing to the growth of a high-performing health system, building a culture of innovation and improving the health of our citizens.

Highlights of the week included stories of impact, the launch of a new series called Meet the Researcher, and a panel discussion with three of our partners, The Lung Association, Saskatchewan, the Alzheimer Society of Saskatchewan, and Heart & Stroke.

See all the stories at shrf.ca/Health-Research-Week

NEW SHRF RESEARCH MANAGEMENT SYSTEM

SHRF is committed to achieving operational excellence by ensuring our processes are improved and optimized for the best user experience. That is why in 2020 we launched a new SHRF Research Management System (RMS) for our funding competitions and grant management.

This new system goes beyond an upgrade. Users of the SHRF RMS will find a modernized platform with improved data capture and a system that has incorporated applicant feedback to improve usability.



REVIEW COMMITTEES

2020-21 BIOMEDICAL ESTABLISHMENT GRANT REVIEW COMMITTEE

Volker Gerdts

(Chair) VIDO-Intervac

Paul Babyn

Saskatchewan Health Authority

Lane Bekar

University of Saskatchewan

Adelaine Leung

University of Saskatchewan

Scott Murphy

University of Regina

Maruti Uppalapatti

University of Saskatchewan

2020-21 SOCIO-HEALTH, SYSTEMS, AND CLINICAL ESTABLISHMENT GRANT REVIEW COMMITTEE

Corey Tomczak

(Chair) University of Saskatchewan

Tracy Christianson

Thompson Rivers University

Tarun Katapally

University of Regina

Katherine Knox

University of Saskatchewan

Maryam Sharifzadeh-Amin

University of Alberta

Elaine Wiersma

Lakehead University

Kristi Wright

University of Regina

2020-21 SOLUTIONS - INNOVATION GRANT REVIEW COMMITTEE

Christopher Hergott

(Co-Chair) University of Calgary

Erin Wilson

(Co-Chair) University of Northern British Columbia

Anita Benoit

University of Toronto

Linda Duffett-Leger

University of Calgary

Lindsay Hedden

Simon Fraser University

Lillian Hung

University of British Columbia

Anna Koné Péfoyo

Lakehead University

Jon McGavock

University of Manitoba

Helen Monkman

University of Victoria

2020-21 SOLUTIONS - IMPACT GRANT REVIEW COMMITTEE

Christopher Hergott

(Co-Chair) University of Calgary

Erin Wilson

(Co-Chair) University of Northern British Columbia

Anita Benoit

University of Toronto

Dzifa Dordunoo

University of Victoria

Lindsay Hedden

Simon Fraser University

Anna Koné Péfoyo

Lakehead University

Helen Monkman

University of Victoria

Michelle Porter

University of Manitoba

THANK YOU to our volunteer peer reviewers who's time and dedication help ensure we are funding the best health research that will have an impact on the health of SK people.

FUNDING RECIPIENTS

2020-21 ESTABLISHMENT GRANT RECIPIENTS

Maureen Anderson	College of Medicine	University of Saskatchewan	\$120,000
Health Services and Policy Research for Mental Health and Addictions in Saskatchewan: A population-health approach			
Cheryl Camillo	Johnson Shoyama Graduate School of Public Policy	University of Regina	\$102,660
Maximizing Saskatchewan Breast Cancer Screening Program Rates through Patient-Partnered Research			
Kristen Conn	Western College of Veterinary Medicine	University of Saskatchewan	\$120,000
Investigation of ICP4 interaction with and regulation of chromatin			
Elizabeth Cooper	Faculty of Kinesiology and Health Studies	University of Regina	\$119,911
Nurturing Warriors: Understanding Mental Wellness and Health Risk Behaviours among Young Indigenous Men			
Sarah Donkers	College of Medicine	University of Saskatchewan	\$119,484
Building towards a neurorecovery model of care for multiple sclerosis physical rehabilitation in Saskatchewan			
Shela Hirani	Faculty of Nursing	University of Regina	\$120,000
Facilitators and Barriers to Breastfeeding Practices of Immigrant Mothers in Saskatchewan			
Hua Li	College of Nursing	University of Saskatchewan	\$119,872
Addressing Mental Health and Addiction Related Emergency Department Visits in Saskatoon			
Rohit Lodhi	College of Medicine	University of Saskatchewan	\$118,165
Drop-out, retention and recovery in opioid use disorder treatment			
Walter Siqueira	College of Dentistry	University of Saskatchewan	\$120,000
An innovative chair-side diagnostic method for detection of periodontal disease activity based on histatin 5 degradation rate			
Julia Totosy de Zepetnek	Faculty of Kinesiology and Health Studies	University of Regina	\$119,997
Nutrition and Exercise on Cardiometabolic Health and Food Intake Regulation in Type 2 Diabetes			

FUNDING RECIPIENTS

2020-21 SOLUTIONS – INNOVATION GRANT RECIPIENTS

Lindsey Boechler	School of Health Sciences	Saskatchewan Polytechnic	\$50,000
Assessing the mental health support needs for Indigenous adolescents residing in northern Saskatchewan: A community based participatory action research study exploring the potential use of virtual reality technology to promote mental health and wellbeing			
Jonathan Gamble	College of Medicine	University of Saskatchewan	\$49,739
Using Implementation Science to Develop, Pilot, and Evaluate a Multidisciplinary Preoperative Assessment in Saskatchewan			
Gary Groot	College of Medicine	University of Saskatchewan	\$48,714
Engaging Caregivers of Persons with Dementia in the Virtual Delivery of and Access to Health Information and Services Funded in Partnership with Alzheimer Society of Saskatchewan			
Ramona Kyabaggu	Johnson Shoyama Graduate School of Public Policy	University of Regina	\$50,000
Engineering and Evaluating a Patient-oriented Home Care Ordering Tool to Enhance Aging in Place During the COVID Era			
Lauren McIntyre	College of Education	University of Saskatchewan	\$44,173
Budget Cuts, the Northern-Rural-Urban Divide, and the Pandemic Response: Exploring Speech-Language Pathologists' and Audiologists' Perceptions and Experiences of in Person and Telepractice Therapeutic Health and Education Services in Saskatchewan			
Megan O'Connell	College of Arts and Science	University of Saskatchewan	\$50,000
Culturally Safe Caregiver Support Groups for Caregivers of Indigenous Peoples Living with Dementia Funded in Partnership with Alzheimer Society of Saskatchewan			
Tracie Risling	College of Nursing	University of Saskatchewan	\$43,382
Using Virtual Reality to Address Persistent Chronic Kidney Care Challenges in Saskatchewan			
Noelle Rohatinsky	College of Nursing	University of Saskatchewan	\$47,452
Exploring the use of virtual care in Saskatchewan in individuals with inflammatory bowel disease and gastroenterologist care providers			
Corey Tomczak	College of Kinesiology	University of Saskatchewan	\$50,000
Health Services and Policy Research for Mental Health and Addictions in Saskatchewan: A population-health approach			
Sabira Valiani	College of Medicine	University of Saskatchewan	\$45,771
Connect-ICU: Using technology to facilitate patient and family-centered care, enhance communication, and build relationships between patients, their loved ones, and the healthcare team in the Intensive Care Unit (ICU)			

2020-21 SOLUTIONS – IMPACT GRANT RECIPIENTS

Tarun Katapally Johnson Shoyama Graduate University of Regina \$150,000
School of Public Policy

CO-Away: Implementation and Evaluation of a Virtual Care Platform for Indigenous Health Decision-Making and Data Sovereignty

Bridget Klest Faculty of Arts University of Regina \$133,150

Help for People Who Have Been Hurt by Healthcare: Creating and Evaluating an Online Resource

Stacey Lovo College of Medicine University of Saskatchewan \$149,987

Empowering Northern Indigenous Communities to Ensure Equitable, Appropriate and Community-based Access to Chronic Musculoskeletal Care using Virtual Technology

Eric Sy College of Medicine University of Saskatchewan \$150,000

Evaluation of the effect of a virtual intensive care unit follow-up clinic on patient outcomes among ICU survivors that have been discharged home (Vi-DISH)

2020-21 RESEARCH CONNECTIONS: COVID-19 RAPID RESPONSE

Gordon Asmundson University of Regina \$10,000

Understanding and Managing COVID Stress Syndrome

Angela Baerwald University of Saskatchewan \$8,450

Virtual Primary Health Care Delivery in Saskatchewan during the COVID-19 Pandemic

Carrie Bourassa University of Saskatchewan \$10,000

Translating 'Protecting Our Home Fires Strategy' Fact Sheets

Douglas Brothwell University of Saskatchewan \$2,513

Coping with COVID-19 Pandemic: Free homemade mask distribution to frontline service providers and vulnerable groups in Saskatoon

Allison Cammer University of Saskatchewan \$10,000

Long-term Care Nutrition COVID-19 Knowledge and Practice Sharing Network

Carla Chabot BridgePoint Center For Eating Disorders \$10,000

BridgePoint Mental Health RecoverED Text Line

Xiongbiao (Daniel) Chen University of Saskatchewan \$10,000

COVID-19 Basics/Diagnosis/Treatment and Related Research/Innovations in Saskatchewan

FUNDING RECIPIENTS

Philip Chilibeck	University of Saskatchewan	\$10,000
Mitigating risk factors (diabetes, obesity, hypertension) associated with COVID-19 complications through promotion of dietary consumption of pulses		
Jorden Cummings	University of Saskatchewan	\$1,717
Rapid Social Media Dissemination of Evidence-Based Self-Care, Wellness, & Coping Resources for Health Workers During the COVID-19 Pandemic		
Keith Da Silva	University of Saskatchewan	\$10,000
Supporting oral healthcare in Saskatchewan – developing evidence-based clinical practice guidelines to minimize the risk of COVID-19 transmission during dental treatment		
Colleen Dell	University of Saskatchewan	\$4,800
Connecting Amidst COVID-19: A Role for USask Therapy Dogs		
Sarah Donkers	University of Saskatchewan	\$9,400
Maintaining neuro-'connectivity': a virtual approach		
Charity Evans	University of Saskatchewan	\$10,000
Supporting Saskatchewan Healthcare Professionals Navigating Drug Shortages During the COVID-19 Pandemic		
Gary Groot	University of Saskatchewan	\$7,800
A COVID-19 Evidence Support Repository: an innovative approach to knowledge mobilization		
Lori Hanson	University of Saskatchewan	\$7,000
Community-based Organization Capacity Effectiveness and Response to COVID-19 in Saskatoon		
Shela Hirani	University of Regina	\$10,000
Knowledge Mobilization Tool to Promote, Protect and Support Breastfeeding during COVID-19		
Natasha Hubbard Murdoch	Saskatchewan Polytechnic	\$10,000
The experience of COVID-19 in Saskatchewan: The knowledge translation plan		
Paulette Hunter	St. Thomas More College	\$10,000
Establishing a patient-oriented research network to support knowledge mobilization during the COVID-19 pandemic		

FUNDING RECIPIENTS

Joanne LaBrash	READ Saskatoon	\$10,000
Community Vital Information Delivery for Read Saskatoon knowledge users		
Jessica Lieffers	University of Saskatchewan	\$9,550
A social media campaign to enhance food security during the COVID-19 pandemic in Saskatchewan		
Ivar Mendez	University of Saskatchewan	\$9,996
Development of a web and a mobile application to share COVID-19 emergent medical protocols, and support remote medical healthcare during the COVID-19 Pandemic		
Jacqueline Messer-Lepage	Saskatchewan College of Paramedics	\$10,000
SCoP COVID RC – 360 Degree Immersive COVID Training for Paramedics		
Cordell Neudorf	University of Saskatchewan	\$8,817
Sharing key lessons from the local public health response to the first wave of COVID-19 in Saskatchewan		
Megan O'Connell	University of Saskatchewan	\$9,993
Dissemination of Virtual Connection Information and Resources for Older Adults in the Era of COVID-19		
Mamata Pandey	Saskatchewan Health Authority	\$7,523
Staying Connected with Social Media During Social Distancing		
Michelle Pavloff	Saskatchewan Polytechnic	\$10,000
The Impact of COVID-19 Knowledge Support on Rural and Remote Saskatchewan Nurses' Mental Health		
Nathalie Reid	University of Regina	\$10,000
Creating a Digital Connections Hub to Support Children in Care in Saskatchewan During COVID-19 and Beyond		
Stuart Skinner	University of Saskatchewan	\$9,050
A Distance Access to Prevention, Treatment and Response (ADAPT-R): An agile approach to COVID-19		
Hassanali Vatanparast	University of Saskatchewan	\$6,500
Coping with COVID-19 Pandemic: Information for Arabic-Speaking Communities, particularly for Syrian and Iraqi refugees, in Saskatchewan		

2020-21 PARTNERSHIP GRANTS

PARTNER: GENOME PRAIRIE

Andrew Cameron	Faculty of Science	University of Regina	\$50,000
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Targeted metagenomic detection and characterization of SARSCoV- 2 and co-infecting viruses

PARTNER: GENOME BC

Philip Davis	College of Medicine	University of Saskatchewan	\$50,000
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Learning In a Time of Crisis: Creating a Canadian COVID-19 Registry

PARTNER: THE LUNG ASSOCIATION, SASKATCHEWAN AND MITACS

Tarun Katapally	Johnson Shoyama Graduate School of Public Policy	University of Regina	\$46,250
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CO-Away: A Rapid Response Digital Tool to Tackle COVID-19

PARTNER: AGE-WELL

Cari McIlduff	College of Medicine	University of Saskatchewan	\$22,500
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Engaging Urban Indigenous Older Adults with Technology Use to Respond to Health and Wellbeing Concerns and Needs

PARTNER: MENTAL HEALTH RESEARCH CANADA

Nazeem Muhajarine	College of Medicine	University of Saskatchewan	\$25,000
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See us, hear us - Children, youth, and families in Saskatchewan coping with mental health during the first year of the COVID-19 pandemic

PARTNER: NORTHERN ALBERTA CLINICAL TRIALS + RESEARCH CENTRE

Rupeena Purewal	College of Medicine	University of Saskatchewan	\$22,280
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Convalescent plasma in COVID-19 research in kids (CONCOR-KIDS)

PARTNER: THE MICHAEL J. FOX FOUNDATION FOR PARKINSON'S RESEARCH

Christopher Phenix	College of Arts and Science	University of Saskatchewan	\$40,000
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Towards Irreversible PET Radiotracers for Imaging Glucocerebrosidase

PARTNER: CANADIAN INSTITUTES OF HEALTH RESEARCH (CIHR)

Payam Deghani		Saskatchewan Health Authority	\$49,389
North American COVID-19 ST-Segment Elevation Myocardial Infarction (NACMI) Registry			
Natasha Gallant	Faculty of Arts	University of Regina	\$50,000
Presence of Family and Other Informal Caregivers in Long-Term Care During COVID-19			
Cordell Neudorf	College of Medicine	University of Saskatchewan	\$50,000
Surveilling the impact of local public health on COVID- 19: A model and application for capturing high-resolution insights from the front-lines during a pandemic			
Megan O'Connell	College of Arts and Science	University of Saskatchewan	\$25,000
Socialization Intervention and Mental Health Monitoring for Older Adults in the Era of Physical Distancing due to COVID-19			
Tracie Risling	College of Nursing	University of Saskatchewan	\$25,000
Advancing Digital Connectivity to Support Population Mental Health during COVID-19			
Eric Sy	College of Medicine	Saskatchewan Health Authority	\$12,500
Randomized, Embedded, Multifactorial Adaptive Platform trial for Community-Acquired Pneumonia (REMAP-CAP)			
Alexander Wong	College of Medicine	University of Saskatchewan	\$50,000
COVID-19: Improving the Evidence to Treat an Emerging Infection Through Observational Studies and a Randomized Trial			

2020-21 SPONSORSHIPS

Alzheimer Society of Saskatchewan A Night to Remember 2020 Virtual Gala	\$1,000
EdenCare Communities EngAGE21 Conference	\$1,000

SHRF supported a population-based survey of Saskatchewan adults conducted by Pollara Strategic Insights—on behalf of Mental Health Research Canada (MHRC). The data was analysed by researchers at the Saskatchewan Population Health and Evaluation Research Unit (SPHERU)—six months and 11 months into COVID-19 in Saskatchewan.

ACKNOWLEDGEMENTS

Thank you to our health research community, partners and all front line and essential workers for their work in the face of a global pandemic.

FINANCIALS

Saskatchewan Health Research Foundation
Financial Statements
For the year ended March 31, 2021

Report of Management

Management is responsible for the integrity of the financial information reported by the Saskatchewan Health Research Foundation.

Fulfilling this responsibility requires the preparation and presentation of financial statements and other financial information in accordance with Canadian generally accepted accounting principles that are consistently applied, with any exceptions specifically described in the financial statements.

The accounting system used by the Foundation includes an appropriate system of internal controls to provide reasonable assurance that:

- transactions are authorized;
- the assets of the Foundation are protected from loss and unauthorized use; and
- the accounts are properly kept and financial reports are properly monitored to ensure reliable information is provided for preparation of financial statements and other financial information.

To ensure management meets its responsibilities for financial reporting and internal control, board members of the Foundation discuss audit and financial reporting matters with representatives of management at regular meetings. Foundation board members have also reviewed and approved the financial statements with representatives of management.

The Provincial Auditor of Saskatchewan had audited the Foundation's statement of financial position, statements of operations, change in net financial assets and cash flow. Her responsibility is to express an opinion on the fairness of management's financial statements. The Auditor's report outlines the scope of her audit and her opinion.



Joe Vidal

SHRF Board Chair



Patrick Odnokon

SHRF CEO

INDEPENDENT AUDITOR'S REPORT

To: The Members of the Legislative Assembly of Saskatchewan

Opinion

We have audited the financial statements of the Saskatchewan Health Research Foundation, which comprise the statement of financial position as at March 31, 2021, and the statement of operations, statement of changes in net financial assets, and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Saskatchewan Health Research Foundation as at March 31, 2021, and the results of its operations, changes in net financial assets, and cash flows for the year then ended in accordance with Canadian public sector accounting standards.

Basis for Opinion

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Saskatchewan Health Research Foundation in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian public sector accounting standards for Treasury Board's approval, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Saskatchewan Health Research Foundation's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Saskatchewan Health Research Foundation or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Saskatchewan Health Research Foundation's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.



- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Saskatchewan Health Research Foundation's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Saskatchewan Health Research Foundation's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Saskatchewan Health Research Foundation to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control identified during the audit.

A handwritten signature in black ink that reads "Judy Ferguson".

Regina, Saskatchewan
June 17, 2021

Judy Ferguson, FCPA, FCA
Provincial Auditor
Office of the Provincial Auditor

SASKATCHEWAN HEALTH RESEARCH FOUNDATION

STATEMENT 1

STATEMENT OF FINANCIAL POSITION

As at March 31

	<u>2021</u>	<u>2020</u>
Financial assets		
Cash and cash equivalents (Schedule 2)	\$ 881,701	\$ 681,435
Accrued interest receivable	8,886	51,455
Accounts receivable	135,959	246,512
Short-term investments (Schedule 2)	4,000,000	4,700,000
	<u>5,026,546</u>	<u>5,679,402</u>
Liabilities		
Deferred Revenue (Note 4)	184,910	184,910
Accounts payable and accrued liabilities	34,335	17,471
Payroll liabilities	37,010	27,385
Grants payable	4,579,223	5,381,670
	<u>4,835,478</u>	<u>5,611,436</u>
Net financial assets (Statement 3)	191,068	67,966
Non-financial assets		
Tangible capital assets (Note 3)	45,481	8,675
Prepaid expenses	11,204	4,237
	<u>56,685</u>	<u>12,912</u>
Accumulated surplus (Statement 2)	<u>\$ 247,753</u>	<u>\$ 80,878</u>

Contractual Rights & Contractual Obligations (Note 5)

(See accompanying notes to the financial statements)

STATEMENT OF OPERATIONS

For the Year Ended March 31

	2021		2020
	Budget	Actual	Actual
	(Note 11)		
Revenues			
Innovation Saskatchewan	\$ 4,849,000	\$ 4,849,000	\$ 4,849,000
Partnerships (note 7)	975,000	768,861	591,273
Other Revenue (note 8)	330,000	252,189	241,992
Total Revenues	6,154,000	5,870,050	5,682,265
Expenses			
Program Expenditures			
Grants & Awards (Note 6)	4,690,000	4,352,823	4,818,360
Program delivery	568,612	553,589	585,216
Program support	465,765	430,782	509,674
	5,724,377	5,337,194	5,913,250
Corporate Expenses	388,865	365,981	353,277
Total Expenses (Schedule 1)	6,113,242	5,703,175	6,266,527
Annual surplus (deficit) (Statement 3, 4)	\$ 40,758	166,875	(584,262)
Accumulated surplus, beginning of year		80,878	665,140
Accumulated surplus, end of year (Statement 1)		\$ 247,753	\$ 80,878

(See accompanying notes to the financial statements)

SASKATCHEWAN HEALTH RESEARCH FOUNDATION

STATEMENT 3

STATEMENT OF CHANGE IN NET FINANCIAL ASSETS

For the Year Ended March 31

	2021	2020
	<u> </u>	<u> </u>
Annual surplus (deficit) (Statement 2)	\$ 166,875	\$ (584,262)
Acquisition of tangible capital assets	(60,597)	-
Disposal of capital assets	49	-
Amortization of tangible capital assets	23,742	5,811
	<u>(36,806)</u>	<u>5,811</u>
Acquisition of prepaid expense	(10,645)	(26,684)
Use of prepaid expense	3,678	34,222
	<u>(6,967)</u>	<u>7,538</u>
Increase (decrease) in net financial assets	123,102	(570,913)
Net financial assets, beginning of year	67,966	638,879
Net financial assets, end of year (Statement 1)	<u>\$ 191,068</u>	<u>\$ 67,966</u>

(See accompanying notes to the financial statements)

STATEMENT OF CASH FLOWS

For the Year Ended March 31

	2021	2020
	<u> </u>	<u> </u>
Operating transactions		
Annual surplus (deficit) (Statement 2)	\$ 166,875	\$ (584,262)
Non-cash items included in annual surplus:		
Amortization of tangible capital assets	23,742	5,811
Net change in non-cash working capital items:		
Accrued interest receivable	42,568	5,645
Accounts receivable	110,553	(115,872)
Prepaid expenses	(6,967)	7,538
Deferred revenue	-	(50,745)
Accounts payable and accrued liabilities	16,864	(43,959)
Payroll liabilities	9,626	2,307
Grants payable	(802,447)	(3,758)
	<u> </u>	<u> </u>
Cash provided by (used in) operating transactions	(439,186)	(777,295)
Capital transactions		
Cash (used) to acquire tangible capital assets	(60,548)	-
	<u> </u>	<u> </u>
Cash applied to capital transactions	(60,548)	-
	<u> </u>	<u> </u>
Investing transactions		
Purchase of investments	(4,000,000)	(4,700,000)
Proceeds from disposal and redemption of investments	4,700,000	5,000,000
	<u> </u>	<u> </u>
Cash provided by (used in) investing transactions	700,000	300,000
	<u> </u>	<u> </u>
Increase (Decrease) in cash and cash equivalents	200,266	(477,295)
Cash and cash equivalents, beginning of year	681,435	1,158,730
	<u> </u>	<u> </u>
Cash and cash equivalents, end of year	\$ 881,701	\$ 681,435
	<u> </u>	<u> </u>

(See accompanying notes to the financial statements)

SASKATCHEWAN HEALTH RESEARCH FOUNDATION
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 2021

1. Establishment of the Foundation

On January 31, 2003, The Saskatchewan Health Research Foundation Act (S.S. 2002, c.S-21.1) came into force establishing the Saskatchewan Health Research Foundation (referred to as The Foundation or SHRF). The Foundation is responsible for organizing, managing and allocating most provincial health research funding in Saskatchewan and for ensuring that supported research fits with the province's health research priorities and leads to benefits for health and the health system in Saskatchewan.

2. Accounting Policies

Pursuant to standards established by the Public Sector Accounting Board (PSAB) and published by the Chartered Professional Accountants (CPA) Canada, the Foundation is classified as an other government organization. The Foundation uses Canadian Public Sector Accounting Standards.

These statements do not include a Statements of Re-measurement Gains and Losses as the Foundation does not have Remeasurement Gains or Losses.

The following accounting principles are considered to be significant.

a) Basis of accounting

The financial statements are prepared using the accrual basis of accounting.

b) Revenue

Historically, the Foundation's main revenue for operations has been contributions from the Ministry of Health – General Revenue Fund. Effective April 1, 2015, responsibility for the Foundation, including the provision of annual grant funding, was transferred from the Ministry of Health to Innovation Saskatchewan. Other revenue comes from partnerships, interest, recoveries and miscellaneous revenue.

Funds not spent during the term of a research grant or award compose recoveries if the grant or award expense was recognized in the prior years.

Government contributions are recognized as revenue when the transfer is authorized and any eligibility criteria are met, except to the extent that contribution stipulations give rise to an obligation that meets the definition of a liability. Contributions are recognized as deferred revenue when contribution stipulations give rise to a liability. Contributions are recognized in the statement of operations as the stipulation liabilities are settled.

c) Measurement uncertainty

The preparation of financial statements in accordance with PSAB accounting principles requires the Foundation's management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of commitments at the date of the financial statements and the reported amounts of revenue and expenses during the period. Actual results could differ from those estimates.

d) Tangible capital assets

The recognition and measurement of tangible capital assets is based on their service potential.

Purchases of furniture, office equipment, and computer hardware and software over \$1,000 are recorded at cost as a capital asset. Purchases below these amounts are expensed as incurred. Amortization is recorded on a straight-line basis as follows:

Furniture	10 years
Office Equipment	5 years
Computer Hardware and Software	3 years
Leasehold Improvements	length of lease

Normal maintenance and repairs are expensed as incurred.

e) Investments

Investments are valued at amortized cost.

3. Tangible Capital Assets

	Furniture and Equipment	Leasehold Improvements	2021 Totals	2020 Totals
Opening cost	\$ 201,543	\$ 13,007	\$ 214,550	\$ 227,021
Additions during the year	60,597	-	60,597	-
Disposals during the year	8,333	-	8,333	12,470
Closing cost	\$ 253,807	\$ 13,007	\$ 266,814	\$ 214,551
Opening accumulated amortization	192,868	13,007	205,875	212,535
Amortization for the year	23,742	-	23,742	5,811
Disposals during the year	8,284	-	8,284	12,470
Closing accumulated amortization	\$ 208,326	\$ 13,007	\$ 221,333	\$ 205,876
Net book value of tangible capital assets	\$ 45,481	-	\$ 45,481	\$ 8,675

4. Deferred Revenue

The Foundation is holding \$184,910 which was bequeathed from an estate in 2019 and will be used for future research projects.

5. Contractual Rights & Obligations

At March 31, 2021, the Foundation had a contractual right with the Saskatchewan Center for Patient Oriented Research (SCPOR) for Core Capacity funding to cover for the administration of patient oriented research programs and grants.

This contractual right results in the following economic resources being transferred to SHRF in future years:

	2021-22
SCPOR Core Capacity	\$ 180,000

At March 31, 2021, the Foundation had the following contractual obligation:

	2021-22	2022-23	2023-24	2024-25	2025-26
Office Lease*	\$101,754	\$101,754	\$101,754	\$101,754	\$69,887

*SHRF entered into a new lease agreement effective April 1, 2021. This new lease expires November 30, 2025.

6. Grants and awards expense

Grants and awards expense is recorded when eligibility has been determined and the grant has been authorized. Awarded funds are sent to the recipients' home institution to manage and disburse. Funds not spent during the term of a research grant or award reduce the respective expense if the expense was recognized in the same year.

SHRF holds annual funding competitions through which applications are adjudicated by experts based on excellence and relevance. Terms vary and are sometimes multi-year. For multi-year grants and awards, eligibility and authorization for all years may be granted in the year the grant is awarded or on a yearly basis depending on the grant program terms and conditions.

SHRF partners with other organizations to fund excellent health research and increase funding available through SHRF funding programs. Also, provided that SHRF standards are met, SHRF partners strategically on funding opportunities offered by other organizations. These partnerships improve the ability of Saskatchewan researchers to participate in national and international research initiatives by showing provincial support. In this scenario, SHRF's partner administers the funding competition and, if a grant is authorized by the partner, SHRF provides matching funding to the recipient's host institution in Saskatchewan. Multi-year partner led grants and awards are recorded by SHRF either in full in the year that authorization is received by the partner or on a year-by-year basis depending on the terms defined in the agreement between the partner organization and SHRF.

Grants and awards expense for the year ended March 31, 2021 is composed of the following:

Capacity	
Establishment Grants	\$1,180,089
Post Doctoral Research Fellowship	\$291,741
	<u>\$1,471,830</u>
 Research Partnerships	
Alzheimer Innovation Awards	\$98,714
Heart & Stroke Chair	\$200,000
Multiple Sclerosis Chair	\$200,000
Partner Led Grants	
Covid-19 Grants	\$455,419
Indigenous Nursing Chair	\$246,800
Jim Pattison Children's Hospital Foundation	\$345,600
Terry Fox	\$50,000
Michael J. Fox	\$40,000
AGE-Well	\$22,500
	<u>\$1,659,033</u>
 Solutions	
Virtual Care Impact & Innovation Grants	\$963,654
 Research Connections	
	\$258,306
	<u><u>\$4,352,823</u></u>

7. Revenues from Partnerships

In 2020-21, revenues generated by the Foundation through its partnerships were as follows:

Alzheimer's Society of Saskatchewan	\$49,357
Heart & Stroke Foundation of Canada	\$100,000
Saskatoon City Hospital Foundation	\$100,000
Jim Pattison Children's Hospital Foundation	\$345,600
SCPOR	\$173,904
	<u>\$768,861</u>

8. Other Revenue

In 2020-21 other revenue generated by the Foundation were as follows:

Interest	\$60,064
Recoveries	\$163,525
Review Services	\$25,000
Miscellaneous	\$3,600
	<u>\$252,189</u>

9. Related Party Transactions

Included in these financial statements are transactions with various Saskatchewan Crown corporations, ministries, agencies, boards and commissions related to the Foundation by virtue of common control by the Government of Saskatchewan, as well as key management personnel and their close family members (collectively referred to as "related parties"). Related party transactions with the Foundation are in the normal course of operations and are recorded at fair market value.

10. Financial Instruments

The Foundation has the following financial instruments: accrued interest receivable, accounts receivable, investments, accounts payable and accrued liabilities, grants payable and payroll liabilities. The following paragraphs disclose the significant aspects of these financial instruments. The Foundation has policies and procedures in place to mitigate the associated risks.

a) Significant terms and conditions

There are no significant terms and conditions associated with the financial instruments, other than investments, that may affect the amount, timing and certainty of future cash flows. Significant terms and conditions for investments are described separately on Schedule 2 of these financial statements.

b) Interest rate risk

The Foundation is exposed to interest rate risk when the value of its financial instruments fluctuates due to changes in market interest rates. As the Foundation seldom disposes of investments prior to maturity, this risk is minimal.

The Foundation's receivables and payables are non-interest bearing. Due to the short-term nature of these, as well as cash and short-term investments, interest rate risk is minimal.

c) Credit risk

The Foundation is exposed to credit risk from potential non-payment of accounts receivable or investment income and principal.

Most of the Foundation's receivables are from registered charities with which the Foundation has partnership agreements. The credit risk is assessed to be minimal based on the history of these organizations honouring their financial commitments to the Foundation in a timely manner.

The Foundation's investments consist of guaranteed investment certificates (GIC's). Therefore, credit risk for investments and related accrued interest receivable is minimal.

d) Fair value

For the following financial instruments, the carrying amounts approximate fair value due to their immediate or short-term nature:

- Accrued interest receivable
- Accounts receivable
- Short-term investments
- Accounts payable and accrued liabilities
- Grants payable
- Payroll liabilities

11. Budget

The operating budget was approved by the Foundation's Board on March 25, 2020.

12. Pension Plan

The Foundation is a participating employer in the Public Employees Pension Plan, a defined contribution pension plan. Eligible employees make monthly contributions of 7% of gross salary with the Foundation contributing 7.6% of gross salary. The Foundation's financial obligation is limited to making required contributions. During the year, the Foundation's total contributions were \$67,357 (in 2019-20, they were \$66,711).

13. Future Research Funding Cash Commitments (Schedule 3)

This schedule shows the cash commitment that is scheduled to be paid over the next five years. This is an ever changing chart, as new grants are awarded, grants are completed and recoveries are recorded, the commitment of total cash to be paid out changes.

14. COVID-19

The COVID-19 pandemic is complex and rapidly evolving. It has caused material disruption to businesses and has resulted in an economic slowdown. The Foundation continues to assess and monitor the impact of COVID-19 on its financial condition. The magnitude and duration of COVID-19 is uncertain and, accordingly, it is difficult to reliably measure the potential impact on the Foundation's financial position and operations.

SCHEDULE OF EXPENSES BY OBJECT

For the Year Ended March 31

	2021		2020
	<u>Budget</u>	<u>Actual</u>	<u>Actual</u>
	(Note 11)		
Grants and awards	\$ 4,690,000	\$ 4,352,823	\$ 4,818,360
Salaries & Benefits	1,006,838	1,051,387	1,095,644
Goods & Services	357,004	293,149	308,006
Board	23,000	6,934	16,230
Travel	36,400	(1,118)	28,287
	<u>\$ 6,113,242</u>	<u>\$ 5,703,175</u>	<u>\$ 6,266,527</u>

(See accompanying notes to the financial statements)

SCHEDULE OF INVESTMENTS

As at March 31, 2021

	MATURITY DATE	CARRYING VALUE	EFFECTIVE RATE
Cash and cash equivalents (Statement 1)			
Cash		\$ 453,291	
TD Waterhouse - Investment Savings Account		428,410	0.20%
		<u>881,701</u>	
Short-term investments (Statement 1)			
Bank of Nova Scotia GIC	23-Nov-2021	3,500,000	0.60%
Canadian Western Bank GIC	23-Nov-2021	100,000	0.90%
Equitable Bank GIC	23-Nov-2021	100,000	0.86%
HomeEquity Bank GIC	23-Nov-2021	100,000	0.78%
Laurentian	23-Nov-2021	100,000	0.90%
B2B Bank GIC	23-Nov-2021	100,000	0.90%
		<u>4,000,000</u>	
		<u>\$ 4,881,701</u>	

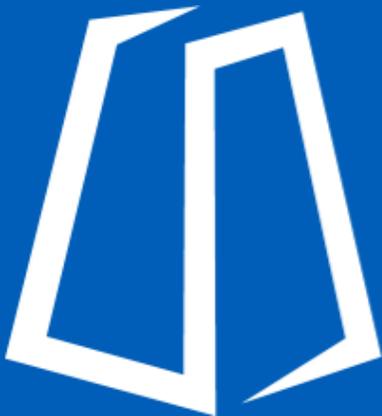
(See accompanying notes to the financial statements)

SCHEDULE OF FUTURE FUNDING CASH COMMITMENTS

As at March 31, 2021

YEAR	SASKATCHEWAN HEALTH RESEARCH FOUNDATION PROGRAMS
2022	\$ 3,352,616
2023	1,080,477
2024	298,613
2025	47,517
2026	-
	<hr/>
	\$ 4,779,223
	<hr/> <hr/>

(See accompanying notes to the financial statements - Note 13)



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