

\$5.4M Research Infrastructure Funding Supports Cutting-Edge Research in Manitoba

April 13, 2021 - Today, Research Manitoba announced a \$5,396,813 research infrastructure funding investment for seven, state-of-the-art projects at the University of Manitoba and The University of Winnipeg. These projects are also supported through the Canada Foundation for Innovation (CFI) Innovation Fund and leverage \$8.1M into our province.

Supporting these innovative projects will drive Manitoba's researchers to the forefront of national and global research areas such as mother-infant health, quantum materials, and subatomic physics and will provide opportunities to manufacture medical imaging devices and create new technologies. The funding will aid the Canadian Longitudinal Study on Aging (CLSA) and promote reconciliation through acknowledgement as the National Centre for Truth and Reconciliation's (NCTR) implements a digital architecture, which enables innovative research meaningful to Indigenous communities.

"These projects allow Manitoba to continue to be innovative in a number of critical fields," said Ralph Eichler, Minister of Economic Development and Jobs. "Our government will continue to support these research investments, which will benefit all Manitobans and provide economic growth through involvement of our local industries."

"Providing opportunities for Manitoba's researchers and innovators to partner here at home is essential for the future of our province, said Karen Dunlop, Chief Executive Officer at Research Manitoba. "I congratulate all of our Innovation Fund recipients on their success and know that their work will advance research in Manitoba and improve many aspects of our society."

Here is a listing of Manitoba's Innovation Fund recipients supported by Research Manitoba.

Manitoba Led Projects at the University of Manitoba:

- **Raymond Frogner**, \$2,411,773, National Centre for Truth and Reconciliation (NCTR)
NCTR Digital Architecture - This project will implement the NCTR digital architecture and enable discovery and access of records for innovative research meaningful to Indigenous communities and provide materials that can advance and improve research relationships between academic researchers and Indigenous communities. The project will also help to identify children lost at Residential Schools (RS); to discover the locations of unmarked RS children's grave sites; to create a statistical analysis of the health and welfare legacy of RS; to design collaborative and innovative health and education programs with Indigenous communities.
- **Michael Gericke**, \$1,638,540, Faculty of Science
The MOLLER Detector: Expanding our understanding of matter in the universe with a new, precision electron detector - The MOLLER project is at the forefront of the worldwide research effort in subatomic physics and is an international effort involving collaborators from Canada and the USA, as well as Germany, Italy, France, and Mexico. The most innovative aspects and primary benefits of this fundamental research include the generation of new knowledge, international visibility for Canada and Manitoba, possible spin-off technologies, and unique training of highly qualified personnel (HQP) for the high-tech entrepreneurial sector.

Manitoba Co-led Projects at the University of Manitoba:

- **Jacob Burgess**, \$234,000, Faculty of Science
Ultrafast Nanoscale Quantum Dynamics (UltraNanoQD) - Extraordinary new microscopes will provide insight into the quantum world and propel a network of researchers centred in Manitoba and Alberta to the forefront of global research on quantum materials. Highly trained quantum scientists will generate world-leading research that creates practical quantum technology and has the potential to attract technology companies to invest in Western Canada's emerging technology sector.
- **Sherif Eltonsy**, \$198,000, Rady Faculty of Health Sciences
Canadian Mother-Child Cohort Active Surveillance Initiative (CAMCCO) - Using cutting-edge infrastructure and real-world evidence data the Canadian Mother-Child Cohort (CAMCCO) Active Surveillance Program will have significant impacts on how medications are used/prescribed during pregnancy and childhood, which will lead to revised guidelines and health policies.
- **Verena Menec**, \$440,000, Rady Faculty of Health Sciences
Canadian Longitudinal Study on Aging (CLSA): A Platform for Interdisciplinary Research - The population of Manitoba is aging, which creates an urgency to understand the biological, physiological, psychological, and social foundations of aging. The CLSA was launched in 2012 to address this urgency and promote healthy aging and this project will upgrade existing infrastructure and expand and modernize systems and equipment. These measures will help identify early causes of health conditions, develop interventions, and inform policies to increase disability-free healthy lifespan.

Manitoba Co-led Projects at The University of Winnipeg:

- **Blair Jamieson**, \$174,000, Faculty of Science
Intermediate Detector for the Hyper-Kamiokande Neutrino Oscillation Experiment - Manitoba scientists will lead in developing the world's largest and most sensitive neutrino detector; this research is directly following from the 2015 Nobel Prize winning experiments conducted by Art McDonald and Takaaki Kajita. A state-of-the-art multipurpose underwater dark-tank facility at The University of Winnipeg will develop technologies directly related to advanced manufacturing of photosensor devices, which could result in marketable products in medical imaging. Highly qualified personnel will be trained using the infrastructure in an environment that focuses on the creation of new technologies, preparing them for positions in high-technology fields.
- **Christopher Wiebe**, \$300,000, Faculty of Science
Building a Future for Canadian Neutron Scattering - This national project will enable research and innovation in areas such as materials for clean energy technology, materials for structural integrity of reliability-critical components of vehicles or nuclear power plants, biomaterials for understanding and combating disease, and materials for information technology. The project will build international partnerships and benefit Manitoba by developing technologies to reduce greenhouse gas emissions; generating knowledge to aid the fight against cancer, Alzheimer's, and antibiotic resistance; and enabling breakthroughs in information technology devices.

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Background:

On March 3, 2021, the Right Honourable Prime Minister of Canada, Justin Trudeau, [announced more than \\$518 million in research infrastructure funding through](#) the CFI Innovation Fund.

About Research Manitoba:

[Research Manitoba](#) is a provincial funding agency, which strives to champion the Manitoba research community, supports early career researchers and graduate students in Manitoba, and coordinates funding of research in health, natural and social sciences, engineering, and the humanities. Our organization also fosters partnerships to advance and strengthen Manitoba's resources, assets, and innovations. Research Manitoba's goal is to become the most improved province in research.

About the Canada Foundation for Innovation (CFI):

The [Canada Foundation for Innovation](#) (CFI) was built on the ideals of thinking big and investing in areas that matter to Canadians. Since its creation in 1997, the CFI has ensured Canadian researchers have the tools — the cutting-edge labs, facilities, and equipment — they need to push the frontiers of knowledge in all disciplines, and to contribute to the full spectrum of research — from discovery to technology development. This has allowed our brightest minds to contribute to better health outcomes, a cleaner, greener environment, evidence-based policy-making, and the competitiveness of Canadian businesses.

About the Canada Foundation – Innovation Fund (CFI-IF):

The Innovation Fund provides investments in infrastructure, across the full spectrum of research, from the most fundamental to applied through to technology development. Projects funded through the Innovation Fund will help Canada remain at the forefront of exploration and knowledge generation while making meaningful contributions to generating social, health, environmental, and economic benefits and addressing global challenges.