



2022-2023 Research Support Fund Incremental Project Grants

Public Acknowledgement, Objectives & Outcomes

Accountability & Public Acknowledgment

The University of Manitoba received **\$1,410,236** in Federal RSF-IPG support.

The following provides an overview of how the funds were spent under each of the five expenditure categories (including the affiliated institutions):

Innovation & Commercialization	Facilities Renewal	Information Resources	Equity, Diversity & Faculty Renewal
\$24,916	\$1,112,969	\$272,351	\$0

Innovation & Commercialization

- Sustain the Office of Partnerships, Knowledge Mobilization & Innovation

The University of Manitoba Office of Partnerships, Knowledge Mobilization & Innovation manages the innovations, commercialization and intellectual property generated by research activities.

By maintaining the support of Tech Transfer Specialists and dedicated marketing resources, UM continues to increase awareness and opportunities for Manitoba businesses by exposing them to post-secondary expertise, technologies and assets.

Facilities Renewal

- MMID Containment Level 3 Lab Renovations – Rm 516

The Max Rady College of Medicine, Department of Medical Microbiology, and infectious Diseases (MMID) requested the renovations of their lab to a Contamination Level 3 (CL3) Aerosol Lab to allow the support of COVID-19 based research.

Due to supply chain delays, portions of the renovations were postponed with a goal of completion by March 2023.

The aerosol CL3 laboratory is not a minor undertaking and will:

- Allow researchers to work with a wide range of "Risk Group 3" agents making them more competitive for the research funding.
- Attract infectious disease scientists and students.

Accountability & Public Acknowledgment

- Provide regional CL3 lab support to organizations such as Cadham Provincial Laboratory
- Provide training in high containment biosafety to the region.
- Maintain its reputation as a national leader in infectious disease teaching and research.

Its success will be determined when the recruit(s) and current researchers are conducting their research in the updated lab space which meets the current safety requirements for a laboratory and increased opportunities for training and research collaborations for COVID-19 based research.

The University of Manitoba and Faculty of Health Sciences remain committed financially to ensure the facilities meet current safety standards and enhance the recruitment of researchers.

- Plant Growth Facility Freezer Room Renovations – Rms 008 D & E

The Department of Plant Sciences requested the renovations of their Plant Growth Facility to maintain the current capabilities to preserve, store and grow plant material. A reliable and fully functional controlled facilities has been identified as a requirement for research activities.

The scope of the work included:

- The removal of the existing freezer partitioning and floors,
- All required abatement and/or remediation,
- Supply and install the new prefabricated walk-in freezer boxes,
- Life safety, related electrical and mechanical installations.

Its success will be determined when the recruit(s) and current researchers are conducting their research in the updated space which meets the current safety requirements and increased opportunities for training and research collaborations for several NSERC-funded faculty members and the research of Highly Qualified Personnel.

The University of Manitoba and the Department of Plant Sciences remain committed financially to ensure the facilities meet current safety standards and enhance the recruitment of researchers.

Accountability & Public Acknowledgment

- Transgenic Facility Retrofit Electron Microscopy Renovations – Rms 7 & 8

The Dept. Human Anatomy and Cell Science (HACS) requested critically important renovations of a room at HACS to house the new JOEL-1400 TEM to ensure high-resolution TEM imaging of samples prepared at the Ultrastructural Imaging platform at HACS. This is expected to provide superior image quality and enhanced cutting-edge research output.

The renovations were initiated in 21-22 due to other IPG project delays and will comprise of:

- Modify existing structure to reduce vibrations.
- Provide filtered air supply to eliminate airborne contaminants.
- Provide sound insulation to the air supply ducts.
- Provide power supply for the new microscopes independent from other building services.

The main objective for the renovations is to boost TEM capabilities for all researchers interested in cell/tissue ultrastructure.

This work benefits a total of 41 research groups using the EM services, including users at the RFHS Colleges of Medicine (n=24), Pharmacy (n=1), Dentistry (n=2), Health Science Centre (n=1), Faculties of Science (n=1), Engineering (n=1), Kinesiology and Recreation Management (n=1), CHRIM (n=2), and SBRC (n=8).

Our goal at the Ultrastructural Imaging platform is to offer comprehensive EM services for the research community in all of Manitoba. Ultrastructural imaging of biological samples and nanoparticles is a critically important gold standard technology across a range of different biological and health-related research fields.

With the new Ultrastructural Imaging platform and new equipment in place, we anticipate a significant uptake in capacity and an increase in from the current 41+ users of this EM service. The new EM platform enables researchers to be more competitive with their research grant applications. It also enables new immunoelectron- and cryo-EM services to our clients.

- Biological Sciences' Aquaculture Facility Renovations -

The Faculty of Science Duff Roblin Animal Care Facility's aim is to reduce water usage by 90% through recirculation while still supplying large volumes of dechlorinated

Accountability & Public Acknowledgment

water daily through biofiltration. This is essential for the research performed in the facility involving fish and other aquatic organisms. Due to substantial supply chain delays in 2021-2022 and inflation of costs, the Facility is requesting support to continue with the renovations.

The renovations comprised of:

- Refurbishing the 3 large steel filter tanks mechanical issues, valves, and seals in the water for leaks, and the internal mechanical elements and repair of any metal pitting on the inside of the tank.
- The chiller units controlling the water temperature are leaking and requires replacement.
- Rebuilding the charcoal filtrations of 2 large filters. The water must be purified of all traces of chlorine before entering the fish tanks and currently have 1 functioning filter. The carbon in the tanks is reactivated every couple of months and regenerations requires a week minimum. The facility requires an absolute minimum of 2 tanks to run.

Its success will be determined when the tanks are running at full capacity and tracking the reduction of water usage, both financially and environmentally.

The University of Manitoba, the Faculty of Science and Physical Plant are committed financially to ensuring our facilities meet current standards and enhance quality research.

Information Resources

- Research Administration Software (RAS) Project

The University of Manitoba continue to implement a new Research Administration Software (RAS) to track grant applications, contracts, certifications, and awards more efficiently and electronically thus eliminating the current paper-based system.

Due to delays with data migration, the Phase 1 – Human Ethics launch was postponed from February 2021 to September 2022, increasing costs in consulting, licensing, and project management. It is currently experiencing numerous implementation issues causing the other Phases to be replanned to 2024-2025.

This project requires resources from various areas to design, develop and deploy the target state. The areas of impact are:

Accountability & Public Acknowledgment

- Offices of Research Services, Research Ethics & Compliance, Environment Health & Safety for their expertise in current state and assist with documenting, conversion, testing and training.
- Information Service & Technology to manage & lead design meetings and assist with communication, hardware setup, conversion, and testing.
- Additional system users required to input information into the new system (researchers, research admin staff) and the approval flows (VPs, AVPs, Senior Admin, Grant/Contract Officers, Affiliates and Finance Staff)
- Additional hardware for setup and maintenance
- Service Desk for additional support

The University remains committed to the implementation both financially and through in-kind support as it aligns to the Strategic Plan to “champion excellence in research, scholarly work and other creative activities and increase our position within the top fifteen research-intensive universities in Canada.”

Accountability & Public Acknowledgment

2022-2023 Performance Indicators and Outcomes

Project Title	IPG Priority Area	\$ IPG Actual Investment	Performance Objectives	Performance Indicators	Target Outcomes	Reported Outcomes
Plant Growth Facility Renovations – Rms 008 D & E	Facilities Renewal	305,964	A reliable and fully functional controlled facilities to maintain the current capabilities to preserve, store and grow plant material.	Facility meeting the current safety requirements with working freezer boxes and availability for research activities	Research and space to meet current safety requirements	Increased research collaborations for faculty members and Highly Qualified Personnel
MMID Containment Level 3 Lab Renovations – Rm 516	Facilities Renewal	296,657	Provide a Containment Level 3 (CL3) Aerosol Lab to allow the support of COVID-19 based research	Renovate top lab in the Department of Medical Microbiology & Infectious Diseases	Complete renovations by March 2023	Move competitive research involving a wide range of “Risk Group 3” agents attracting infectious disease scientists and students
Transgenic Facility Retrofit Electron Microscopy Renovations – Rms 7 & 8	Facilities Renewal	177,348	To boost Transgenic Electron Microscopy (TEM) capabilities for all researchers interested in cell/tissue ultrastructure	Modify existing structure & power supply, eliminate airborne contaminants and sound insulation to the air supply ducts	Offer comprehensive Electron Microscopy services for the research community in Manitoba in the fall of 2022	Continue to invest in training staff & students; Project Initiated sooner (21-22) due to other IPG project delays

Accountability & Public Acknowledgment

Project Title	IPG Priority Area	\$ IPG Actual Investment	Performance Objectives	Performance Indicators	Target Outcomes	Reported Outcomes
Biological Sciences Aquaculture Facility Renovations	Facilities Renewal	333,000	Reduce water usage by 90% through recirculation while applying large volumes of dechlorinated water daily through biofiltration	Refurbished steel filter tanks and purified water with controlled water temperature	Facility running at full capacity and tracking the reduction of water usage, both financially and environmentally	Essential research performed in the facility involving fish and other aquatic organisms
Sustain the Office of Partnership and Innovations	Innovation and commercialization	24,916	Increase industry requests for expertise, negotiate IP terms and graduate students & post-docs creating companies based on their research	Salary for Tech Transfer Specialists	Maintain the management and administration of intellectual properties generated by research activities	Increased awareness and opportunities for Manitoba businesses of post-secondary expertise, technologies and assets
Research Administration Software (RAS) Project	Information Resources	272,351	Implement new software to track grant applications, contracts, certifications and awards more efficiently & electronically	Phase 1 - Human Ethics FG	Phase 1 - Human Ethics currently live in Sept 2022	Phase 1 - Human Ethics currently live with issues to resolve before moving forward to next Phases
				Phase 2 – Grants and Contracts		Phase 2 – delayed due to Phase 1 issues – re-

Accountability & Public Acknowledgment

						planned to Dec 2023
				Phase 3 – Animal Care		Phase 3 – replanned for April to December 2024
				Phase 4 – Human Ethics Bannatyne		Phase 4 – delay in Research Manitoba plan for production – ETA to be determined
				Regular status reports from Project Management Team		