

THE INSTITUTE

DISCOVERY THAT MATTERS

OUR 2030 VISION

Centre universitaire
de santé McGill
Institut de recherche



McGill University
Health Centre
Research Institute

rimuhc.ca

Our 2030 Vision builds toward a future where the Research Institute of the McGill University Health Centre (The Institute) is globally recognized as a leader in transformative discoveries that advance precision health throughout the life course.



WHAT DOES IT MEAN TO ADVANCE PRECISION HEALTH?

Precision health is a modern approach to medicine that tailors the way we prevent, diagnose, and treat diseases on the basis of each patient's unique characteristics. The ultimate goal of precision health is to ensure the best care for each individual by providing the right care to the right person at the right time.

In alignment with The Institute's purpose—**to create clinical impact through interdisciplinary science**—our 2030 Vision outlines the strategic initiatives to realize precision health research. **Five research priorities** help researchers develop scientific breakthroughs and improve patient care, and **four enabling priorities** ensure we provide an outstanding working environment that will enable and facilitate research success.



5 RESEARCH PRIORITIES

4 ENABLING PRIORITIES

OUR RESEARCH PRIORITIES

1 EXPAND MECHANISTIC AND MULTIOMIC RESEARCH TO UNDERSTAND HEALTH AND DISEASE

2 DEVELOP PRECISE AND EFFECTIVE PREVENTIVE, DIAGNOSTIC, AND THERAPEUTIC STRATEGIES

3 INTEGRATE DATA SCIENCE AND DIGITAL TECHNOLOGIES ACROSS RESEARCH

4 ADVANCE CLINICAL TRIALS THROUGH NOVEL METHODS TO INFORM AND IMPROVE PATIENT CARE AT ALL AGES

5 INCORPORATE DETERMINANTS OF HEALTH AND DISEASE TO REDUCE DISPARITIES

1 EXPAND MECHANISTIC AND MULTIOMIC RESEARCH TO UNDERSTAND HEALTH AND DISEASE

Our mechanistic science will identify new targets and molecular pathways of disease to inform novel therapies in a precise way. This will embrace multiomics to help unravel mechanisms in a way that is personalized to each patient.

HOW WILL WE REALIZE THIS PRIORITY?

- Increase researchers' abilities to functionally access and leverage multiomic data and analytical tools
- Develop alternative preclinical models of disease to drive discovery and test therapeutics
- Broaden research collaborations and partnerships for modelling human disease

RECENT PROGRESS:

- Advancing our Proteomics and Molecular Analysis Platform with cutting-edge analysis systems to enhance our capabilities in transformative multiomics research



2 DEVELOP PRECISE AND EFFECTIVE PREVENTIVE, DIAGNOSTIC, AND THERAPEUTIC STRATEGIES

To transform the way we manage disease throughout the life course, we must both leverage and create new strategies that improve our ability to curb the development of a disease before it starts; identify a disease before or immediately upon initiation; and prevent, stop, or reverse disease progression.

HOW WILL WE REALIZE THIS PRIORITY?

- Develop and apply advanced biomarker approaches to predict disease progression and validate therapeutic efficacy
- Enhance capabilities in cell, RNA, and regenerative therapy
- Increase the use of, and pioneer new biomedical technologies

RECENT PROGRESS:

- Established a Liquid Biopsy Core and a Centre for Applied Nanomedicine
- Expanded The Institute's Cellular Therapy Laboratory to allow increased participation in clinical trials

4 ADVANCE CLINICAL TRIALS THROUGH NOVEL METHODS TO INFORM AND IMPROVE PATIENT CARE AT ALL AGES

Advancing our capacity to lead and participate in innovative clinical trials is crucial to the translation of precision health discoveries from bench to bedside, throughout the life course, in a true patient-centric manner.

HOW WILL WE REALIZE THIS PRIORITY?

- Increase the number of Institute investigator-led and Phase I clinical trials
- Broaden awareness of, and access to, the Centre for Innovative Medicine (CIM)
- Facilitate innovation in trial design methodologies

RECENT PROGRESS:

- Expanded our team with a Research Facilitator to help researchers navigate the complex processes associated with launching new clinical research studies
- Added a regulatory affairs specialist to guide our researchers in Health Canada applications
- Achieved 100% success rate in clinical trial grants submitted to the CIHR Operating Grant: Clinical Trials Project competition in 2024

3 INTEGRATE DATA SCIENCE AND DIGITAL TECHNOLOGIES ACROSS RESEARCH

The emergence of artificial intelligence (AI) and data science-based tools and techniques now permits researchers to meaningfully advance precision health across the life course by visualizing the patient "puzzle" in its entirety, as opposed to evaluating individual pieces in isolation.

HOW WILL WE REALIZE THIS PRIORITY?

- Harness AI and data science tools and techniques for research and discovery
- Apply digital tools and therapies to enhance patient health and wellness
- Advance centres of excellence in digital health research

RECENT PROGRESS:

- Established The Institute's Digital Health Research Hub
- Initiated The Institute's Centre for Digital Brain Therapies

5 INCORPORATE DETERMINANTS OF HEALTH AND DISEASE TO REDUCE DISPARITIES

Different aspects of identity and social systems shape how patients experience and access healthcare. Just like evaluating drug dosage, integrating these factors in research is essential to advance precision health throughout the life course.

HOW WILL WE REALIZE THIS PRIORITY?

- Increase diversity in research participants by broadening stakeholder engagement and knowledge mobilization
- Build research relationships with Indigenous communities
- Create a Health Equity Research Hub representative of Canadian communities
- Implement institution-wide education and support related to inclusive health research

RECENT PROGRESS:

- Institutional Equity, Diversity and Inclusion (EDI) Policy created in 2021, with an EDI and Human Resources Committee at the Board level to ensure implementation
- Institutional EDI Action Plan approved by the Fonds de recherche du Québec (FRQ) in 2023
- Hired an EDI Specialist to implement our plan and monitor our new EDI Advisory Committee

OUR ENABLING PRIORITIES

A

PROVIDE AN ENVIRONMENT OF EXCELLENT SERVICE TO SUPPORT WORLD-CLASS RESEARCH

B

STRENGTHEN OUR RESEARCH CAPABILITIES, TOOLS, AND PLATFORMS

C

DEVELOP OUR TALENT AND REINFORCE INTERDISCIPLINARY RESEARCH NETWORKS

D

INTENSIFY AND ENRICH OUR DIVERSE PARTNERSHIPS

A

PROVIDE AN ENVIRONMENT OF EXCELLENT SERVICE TO SUPPORT WORLD-CLASS RESEARCH

We believe that operational excellence drives research excellence.

HOW WILL WE REALIZE THIS PRIORITY?

- Ensure accessible, clear, and continuous communication
- Establish a comprehensive onboarding process for new researchers and staff
- Implement robust administrative, infrastructure, and IT support
- Establish an eco-friendly environment that supports sustainability

RECENT PROGRESS:

- Initiated a comprehensive onboarding program
- Launched an application modernization program to streamline and integrate administrative processes across The Institute

B

STRENGTHEN OUR RESEARCH CAPABILITIES, TOOLS, AND PLATFORMS

We understand that our research outputs are only as strong as the tools we use to generate them.

HOW WILL WE REALIZE THIS PRIORITY?

- Improve access to, and usability of, MUHC data to support research
- Advance the capabilities and accessibility of our research support and technology platforms
- Conduct a researcher-guided evaluation of needs and use cases to inform additional investments

RECENT PROGRESS:

- Improving the usability of MUHC data for research purposes through the *MDCIone* initiative
- Investing in the eight Technology Platforms in our Centre for Translational Biology

C DEVELOP OUR TALENT AND REINFORCE INTERDISCIPLINARY RESEARCH NETWORKS

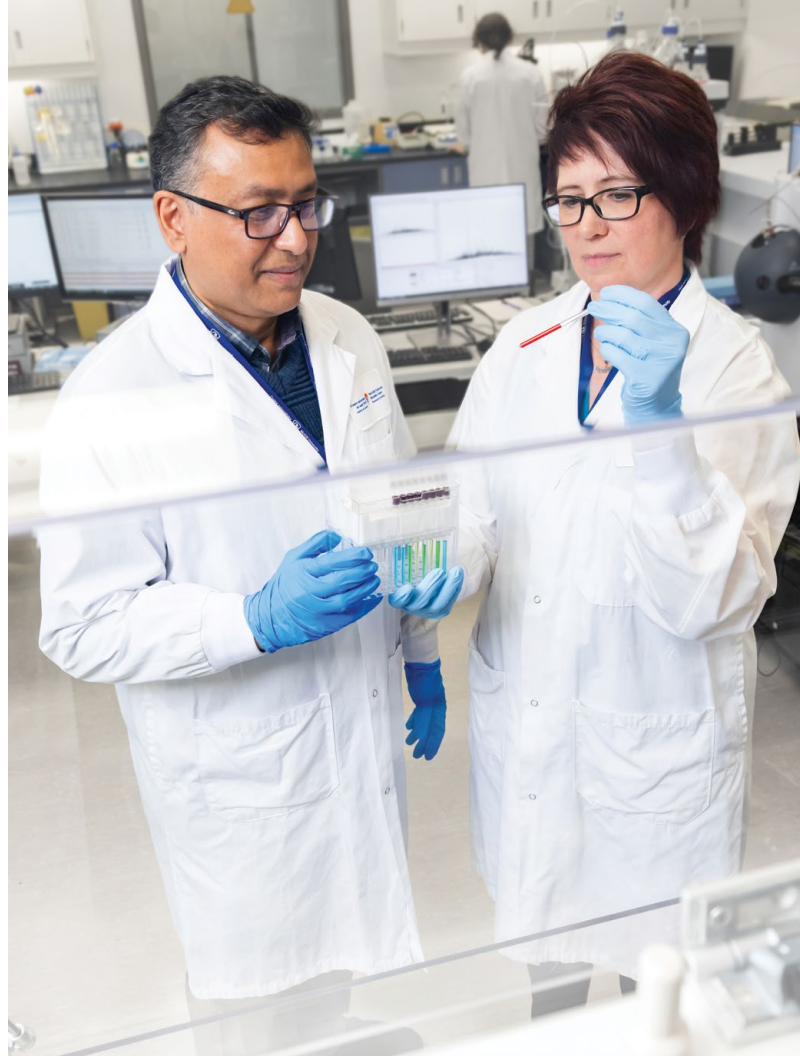
To be excellent, we must establish ourselves as a preferred workplace for skillful training and visionary research.

HOW WILL WE REALIZE THIS PRIORITY?

- Strengthen our team science support and interdisciplinary research networks
- Recruit researchers and highly qualified personnel strategically
- Enhance training opportunities across targeted skillsets
- Implement high-quality mentorship programs for all personnel

RECENT PROGRESS:

- Offering training by professional medical writers in writing compelling grants
- Established CANTRAIN, a clinical trials training platform funded by a CIHR grant of \$11.3 million
- Launched the new Distinguished Professor Lecture Series to connect our researchers with global leaders in health research



D INTENSIFY AND ENRICH OUR DIVERSE PARTNERSHIPS

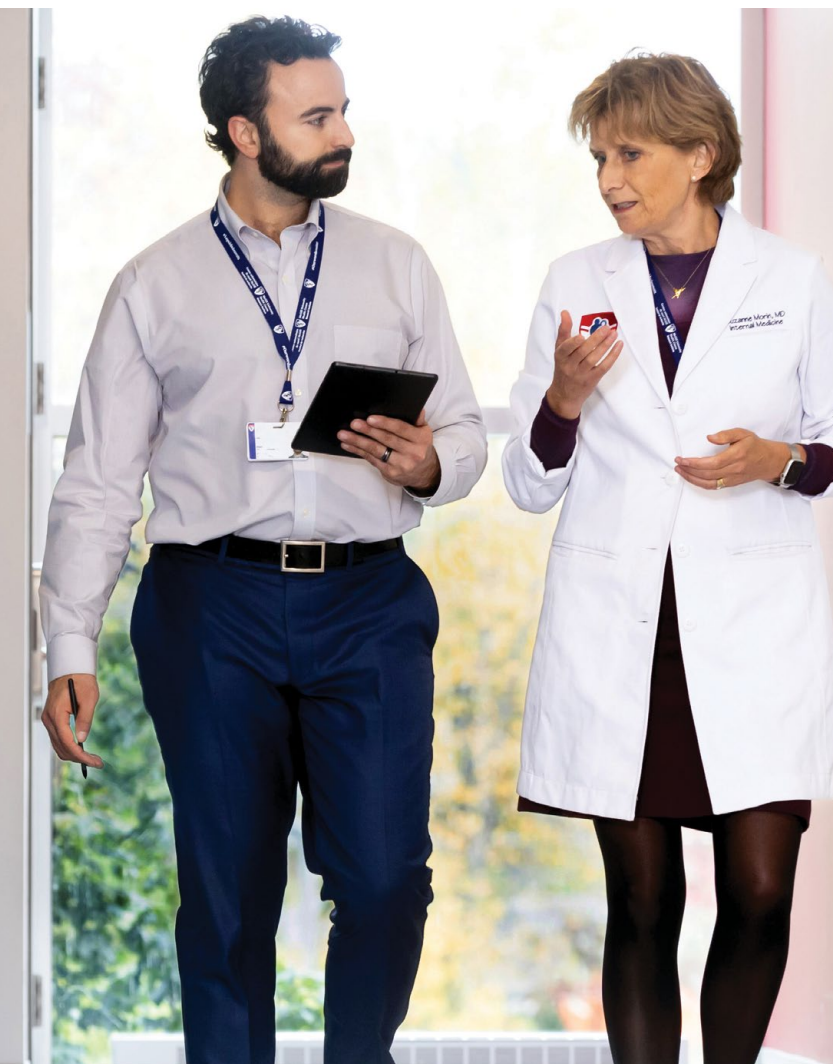
The inclusion of diverse perspectives introduces additional knowledge that strengthens our own, driving innovation in health science research.

HOW WILL WE REALIZE THIS PRIORITY?

- Engage patient and community advisory groups from the diverse locales served by The Institute and the MUHC
- Enhance collaborative opportunities across the Montreal and Quebec health-science and research ecosystems
- Strive to integrate national and international collaborators in large-scale, multisite research initiatives

RECENT PROGRESS:

- Created a framework to pair researchers with patients and caregivers
- Awarded funding in the *FRQ Thematic Network Competition (2024-2032)* to formally establish interdisciplinary Quebec-based Networks that leverage and harmonize province-wide expertise and resources. Specifically, these are the Network for Rare Diseases, the Digital Health Network, and the Network to Transform Autism Care



Imagine thousands of the world's greatest scientific minds,
all working together—right here—to serve our communities.
Dynamic researchers, catalysts of change, the bold and
the curious in relentless pursuit of groundbreaking discovery.

Discovery that matters. For us all.

THE INSTITUTE

#1 IN QUEBEC*

Centre universitaire
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McGill University
Health Centre
Research Institute

* According to the Canada Top 40 Research Hospitals survey by Research Infosource Inc.