



McGill

Research and
Innovation

R+I

MCGILL UNIVERSITY STRATEGIC RESEARCH PLAN

AT A GLANCE

McGill is a world-class research-intensive, student-centred university with an enduring sense of public purpose. The Strategic Research Plan (SRP) expresses McGill's core commitments to research, identifies ongoing Research Excellence Themes, and outlines our implementation strategy and objectives.

View the full plan at: www.mcgill.ca/research/srp

CORE COMMITMENTS

The following five core commitments illustrate McGill's dedication to the pursuit of research excellence:

FOSTERING CREATIVITY: Encourage reflection and inquiry in all aspects of the arts and humanities, science and technology, and health.

PROMOTING INNOVATION: Increase the emphasis on innovation in all its forms – social, pedagogical, and organizational as well as through the development of new products and processes – to play a leading role in a knowledge-based society.

PROBLEM SOLVING THROUGH COLLABORATION AND PARTNERSHIP:

Facilitate mutually-rewarding research partnerships across academic fields, both on our campuses and with external partners.

PROMOTING EQUITY, DIVERSITY, AND INCLUSION: Research excellence and equity go hand in hand. The under-representation of voices among our researchers and students is an unacceptable loss of human potential that we are striving to overcome.

SERVING SOCIETY: Apply the ingenuity and creativity of McGill research in service to society.

OBJECTIVES

McGill has identified four primary objectives in the service of research excellence:

01

STRENGTHEN
INNOVATION AND
PARTNERSHIP AGENDA



02

STEWARD RESEARCH
TRAJECTORIES TOWARD
COLLABORATIVE,
LARGE-SCALE INITIATIVES
AND INTERNATIONAL
PARTNERSHIPS



03

PROMOTE AND DRAW ON
DIVERSITY IN ALL ASPECTS
OF RESEARCH



04

LEAD IN OPEN SCIENCE
AND DATA MANAGEMENT



MCGILL.CA/RESEARCH/SRP



RESEARCH STRENGTHS

DEVELOP KNOWLEDGE OF THE FOUNDATIONS, APPLICATIONS, AND IMPACTS OF TECHNOLOGY IN THE DIGITAL AGE: McGill is at the vanguard of multidisciplinary research in mathematics, physics, and engineering, which enables a wide spectrum of industrial-technological applications. Our work in social sciences and humanities helps us better understand technology's role in societal institutions.

KEY RESEARCH AREAS: *Artificial Intelligence, Robotics, New Musical Forms, Additive Manufacturing, Optical Fiber Communication Systems, Commodity Supply Chains*

UNDERSTAND THE POTENTIAL OF THE HUMAN BRAIN AND THE ENTIRE NERVOUS SYSTEM: McGill is one of the world's leading centres for research and education in the neurosciences and related fields, and is uniquely positioned to advance knowledge and understanding of the human brain and the prevention and treatment of mental and neurological disorders.

KEY RESEARCH AREAS: *Neurodegenerative Disorders, Mental Health, Pain*

DESIGN AND CREATE SUSTAINABLE MATERIALS, TECHNOLOGIES, LANDSCAPES, AND COMMUNITIES: McGill research is leading the response to the challenges of sustaining the life support systems of the planet for now and for future generations with fundamental and applied science that advances renewable materials, energy, agricultural, and transportation systems.

KEY RESEARCH AREAS: *Sustainable Working Landscapes, Northern, Arctic, and Circumpolar Research, Precision Agriculture Science, Green Chemistry*

ADVANCE BIOMEDICAL AND HEALTH SCIENCES FOR HEALTHY POPULATIONS: McGill is a world leader in translating discoveries from basic research in disease mechanisms at the molecular and cellular levels into improved clinical outcomes. We are focused on using basic and applied research to provide solutions for efficient and high-quality health care and rehabilitation for a diverse set of diseases and conditions.

KEY RESEARCH AREAS: *Genomic Medicine, Human Health and Well-Being, Cancer, Stem Cells, Infectious and Inflammatory Diseases*

STRENGTHEN PUBLIC POLICY AND ORGANIZATIONS, AND CREATE A DEEPER UNDERSTANDING OF SOCIAL TRANSFORMATION: McGill's researchers are addressing the challenges of this century, which require new forms of global accountability as well as creative, multidisciplinary approaches to implementing change that builds on the strengths of the public, private, and social sectors.

KEY RESEARCH AREAS: *International Relations, Human Rights, First Nations, Public*

EXPLORE EARTH'S BIOLOGICAL AND PHYSICAL SYSTEMS AND THE UNIVERSE: McGill is a major player in the rapid and extensive advances in our understanding of the natural world and its systems. Our research is revealing the laws of physics, chemistry, and mathematics, the nature of life, the place of the Earth in the Universe, and the evolution of our own species.

KEY RESEARCH AREAS: *Cosmology and Astrophysics, Ecology and Evolution, Nanoscience*

EXAMINE FUNDAMENTAL QUESTIONS ABOUT HUMANITY, IDENTITY, AND EXPRESSION: McGill researchers explore bold and challenging themes that form the basis of critical and ethical thinking and self-awareness in an interconnected world.

KEY RESEARCH AREAS: *Youth and Girlhood Studies, Jazz Composition and Performance, Linguistics, Montreal*

