

Acadia Advances Research with New Human Motion Lab

Acadia will tackle injury and chronic disease with improved research of human motion

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Acadia University researchers will take a strong step forward in helping Canadians combat injury and chronic disease with the announcement of an \$860,000 Human Motion Laboratory to be built at Acadia. The new lab will provide detailed analysis of human movement.

The Honourable Gary Goodyear, Minister of State for Science and Technology, today announced support for research projects in 31 communities across Canada. “Our government is investing in science and technology to improve the quality of life of Canadians and strengthen the economy,” said Minister of State Goodyear. “Investments in research and development are ensuring that our scientists have the resources they need to be successful.”

The funding is from the Canada Foundation for Innovation (CFI). “Canadians from coast to coast to coast can be assured that Canada’s research community is bringing its talents to bear on the problems that matter to them,” said Dr. Gilles G. Patry, CFI president and chief executive officer. “This round of investment illustrates the value of research and innovation in building stronger, healthier and more prosperous communities.”

The Canada Foundation for Innovation (CFI) announced its \$322,291 contribution to Acadia today as part of its Leadership Opportunity Fund (LOF), which enhances research infrastructure to help universities attract and retain the very best researchers. This is Acadia’s largest LOF project to-date. Additional funds for the project come from the Nova Scotia Research and Innovation Trust (NSRIT) in the amount of \$322,291, a private donor who committed \$100,000, and \$6,000 from the Acadia Kinesiology Society.

“There are a number of research programs at Acadia that contribute in substantial ways to the development of a healthy society,” said Dr. David MacKinnon, Acadia’s dean of Research and Graduate Studies. “The new facilities that will be built from Dr. Landry’s CFI grant will elevate the research that can be done to improve the health of Nova Scotians and all Canadians who suffer from injury and chronic illnesses affecting mobility and wellbeing. We are exceptionally fortunate to have Dr. Scott

Landry on faculty.”



Assistant professor, Dr. Scott Landry, led the drive to create the new research space. “Each year the combined costs (direct and indirect) in Canada for managing osteoarthritis and anterior cruciate ligament (ACL) injuries are in the billions of dollars,” Landry explained. “The proposed research will strive to slow the progression of the disease and decrease the incidence of ACL injuries, thus leading to reduced costs to the healthcare system.”

He said beyond improving research and cutting costs to healthcare, the Human Motion Laboratory will enhance the Acadia student research experience.

“Acadia University is where I was first introduced to research as an undergraduate honours biology and engineering student,” he said. “I am fortunate to be back at Acadia in the kinesiology program, and we are very much looking forward to establishing a strong, collaborative research program focused on analyzing human movement to better understand knee osteoarthritis, sporting injuries, and the impact of physical activity on the prevention of chronic disease.”

The Human Motion Laboratory will be housed in Acadia’s Athletics Complex and will serve as the first fully accessible research laboratory for the Centre of Lifestyle Studies within Acadia’s School of Recreation Management and Kinesiology.

“With the importance of wellness and motion to our Athletics programming – from community health outreach to extracurricular activities and our varsity athletic teams – having this laboratory in our complex will benefit the entire Acadia community,” said Kevin Dickie, Acadia’s director of Varsity Athletics. “We are pleased to be a partner in the new initiative.”

The Human Motion Laboratory will be a multi user research centre for Acadia faculty and students with a focus on detailed biomechanical, neuromuscular, and physiological analyses of human movement. The overarching goal of the facility will be to keep people physically active throughout their lifespan.

The laboratory will also enable faculty and student researchers across the Acadia campus to work closely with various healthcare professionals in addressing injury and chronic disease. In addition, the biomechanical equipment housed in the new facility will provide opportunities to collaborate with industry partners.

Research planned for Acadia’s New Human Motion Laboratory:

Dr. Scott Landry will conduct long term research on identifying risk factors for knee injuries during athletic maneuvers, understanding the progression of knee osteoarthritis through gait analysis, and understanding the higher prevalence of ACL injuries and knee osteoarthritis in females.

Dr. Shilpa Dogra will conduct physiology research on women with cardiovascular disease, athletes with asthma, and older adults. Her research will allow for better determination of the impact of lifelong physical activity on the prevention of chronic disease, which is of importance across Canada and beyond.

Dr. Roxanne Seaman will use the new research facility to promote and encourage children of varying ability levels to be physically active through a detailed analysis of fundamental motor skill development.

Collaborations: The lab will also foster collaborative research with other departments and schools within the university (e.g. biology, engineering and computer science), with local health authorities/organizations, and local community-based programs such as Acadia Active Aging and S.M.I.L.E., as well as continued collaborations with researchers at other universities.

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