

**John R. Evans Leaders Fund  
 Backgrounder**

**Ontario**

The Canada Foundation for Innovation (CFI) Board of Directors approved a contribution of \$15,387,868 to support 89 infrastructure projects in the province.

Project Title	Maximum CFI Contribution
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**Brock University**

Sorting out Inflammation: Origins and Offences of the Mast Cell in Allergy	\$206,063
Investigating the Impacts of Climate and Landscape Change on Northern Freshwater Resources and Carbon Export	\$105,758
<b>2 projects</b>	<b>\$311,821</b>

**Carleton University**

*NSERC/Cisco Industrial Research Chair in Sensor Technology for the Internet of Things	\$200,000
<b>1 project</b>	<b>\$200,000</b>

*\*Funding for Research Infrastructure Associated with a NSERC Industrial Chair*

**Lakehead University**

Investigations of Two-phase Flow Dynamics and Hydraulic Structures	\$99,476
On-line Ultrasonic Spectroscopy for Analysis of Industrial Emulsions and Suspensions	\$107,638
<b>2 projects</b>	<b>\$207,114</b>

**Laurentian University**

A Field and Laboratory Analysis Facility for Advancing Biomineralization and Bioremediation of Mine Wastes	\$149,984
Advanced Mass Spectrometry Facility for Analysis of Complex Biological Samples	\$358,781
<b>2 projects</b>	<b>\$508,765</b>

**McMaster University**

Advanced Electron Spectroscopy Tools	\$800,000
Plasma Focused Ion Beam for Mesoscale Tomography of Materials	\$799,980
Electrified Powertrain Modeling Laboratory: The Optimization of Efficiency, Cost, and Lifetime of Electrified Vehicles	\$80,000

## ... / McMaster University

Building a Bacteriophage Biotechnology Platform	\$135,361
*Computational Suite for Emerging Concepts in Target Tracking and Information Fusion	\$100,000
<b>5 projects</b>	<b>\$1,915,341</b>

*\*Funding for Research Infrastructure Associated with a NSERC Industrial Chair*

## Nipissing University

Infrastructure to Support the Nipissing University Human Evolution Laboratory	\$130,693
Analysis of Small Organic Molecules	\$223,060
<b>2 projects</b>	<b>\$353,753</b>

## Queen's University

Digital Pathology in Support of Cancer Clinical Trials	\$197,065
Investigation of Large Protein Complexes	\$100,192
Evaluation of the Role of Sleep for Novel Non-invasive EEG Biomarkers for Improved Diagnosis and Prognosis in Epilepsy	\$139,914
Social Ecology of Vulnerable Media: Preservation, Migration, Remediation of Women's and Indigenous Audiovisual Archives	\$400,000
Real-time Imaging Platforms for Monitoring Cancer Cell Motility and Metastasis	\$124,040
A Hybrid Mesocosm-Ecosystem Facility for Aquatic Ecotoxicology	\$167,602
Subject-Specific Biomechanics of Human Joint Systems	\$400,000
Hemodynamics and Energy Mobility (HEMo) Laboratory	\$76,520
Reproductive Sciences Vascular Study Lab	\$63,540
Innovative Cladding Materials of Next Nuclear Generation Materials	\$167,400
<b>10 projects</b>	<b>\$1,836,273</b>

## Ryerson University

BeTOP _Building efficiency: Testing, Operation and Performance of Advanced Building Systems	\$149,997
Smart Things at Ryerson - ST@Rlab	\$84,360
Laboratory Infrastructure for All-aqueous Microfluidic Cell Coating	\$122,015
<b>3 projects</b>	<b>\$356,372</b>

## Trent University

Population Genomics of Natural Populations	\$59,605
<b>1 project</b>	<b>\$59,605</b>

**University of Guelph**

Bio-Renewable Innovation Lab (BRIL) for Advanced Bio-refinery and Agricultural Products	\$177,127
Micrometeorological Instrumentation to Evaluate Mechanisms of Forest Migration and Treeline Advance	\$35,323
The Guelph Family Health Study – A Landmark Study for Health Promotion and Obesity Prevention	\$126,144
Advancing Microbial Cell Biology via Protein Crystallography	\$142,358
Assessment of <i>in vivo</i> Tissue Morphology	\$153,359
<b>5 projects</b>	<b>\$634,311</b>

**University of Ontario Institute of Technology**

UOIT Health and Human Performance Laboratory	\$43,500
Energy Automation and Management Infrastructure for Smart Resilient and Self-healing Grid Research Laboratory	\$42,000
Eye-Link II Tracking and Eego MyLab Systems to Study Multi-sensory Integration	\$64,676
<b>3 projects</b>	<b>\$150,176</b>

**University of Ottawa**

Multi-Scale Analysis of Tumourous Tissues	\$409,476
Radiopharmaceutical Development for Cardiovascular and Neurological PET Imaging	\$172,155
<b>2 projects</b>	<b>\$581,631</b>

**University of Toronto**

Computational Social Science Lab	\$76,000
Advancing Neural Network Accounts of Cross-linguistic Differences, Language Learning, and Ambiguity Resolution	\$100,000
Sustainable Mineral Processing Laboratory	\$122,250
The Relationship Between Genome, Epigenome, and Plant Performance	\$100,000
Optogenetic Analysis of the Molecular Pathogenesis of Cerebral Cavernous Malformations using Super-resolution	\$488,064
Affective Science & Health Laboratory: Integrated and Dynamic Assessment of Experience, Behavior, and Physiology	\$100,000
Characterization of Exhaust Emissions from On-road Vehicles using Portable Emission Monitoring Systems (PEMS)	\$200,000
Target Screening and Immuno-profiling Platform for Difficult-to-treat Cancers	\$777,119
The Mutual Influence of Attention and Knowledge Formation in Successful Learning	\$150,000
The Modification of Brain Circuits by Chronic Pain and its Effect on Behaviour	\$110,000

.../ **University of Toronto**

Ultrasound-Activated Nanobiomaterial Synthesis and Characterization Laboratory	\$172,250
Investigation of Bacteriophage Contributions to Bacterial Virulence and Microbiome Dynamics	\$150,000
Using Seasonal Variation to Connect Fish Physiology and Behavior with Ecosystem-level Energy and Contaminant Flow	\$100,000
Translational Research Pipeline for Retinal and Neurodegenerative Diseases	\$366,237
A Research Platform to Study the Compartmentalized Crosstalk of Host and Microbiota	\$240,000
Heterogeneous Systems Laboratory	\$85,000
Roles of Neural, Physiological, and Behavioural Variability in Cognitive Health	\$148,039
Prosocial Emotions Laboratory	\$75,000
De Novo Assembled and Phased Whole Genome Sequence for the Canadian Cystic Fibrosis Population	\$340,200
Integrated Atomic Force Microscopy (AFM)-Optical Microscopy Facility for the Nanoscale Study of Microbial Biofilms	\$195,294
Laboratory for Building Energy and Indoor Environment Research	\$122,250
New Mining, Water and Environment Facility: Innovating Practice, Improving Sustainability	\$232,000
Advanced Research Computing Cluster for the Development of Next-generation PDE Algorithms	\$140,250
Dissecting Tissue Growth and Organization at the Single Cell Level	\$472,533
High-throughput Flow Cytometry Capacity for Functional Genomics, Proteomics and Biologics Development	\$110,000
Mechanistic Characterization and Clinical Therapeutic Interventions in Critical Illness	\$343,897
Linking Memory and Reasoning in the Developing Human Brain	\$130,000
<b>27 projects</b>	<b>\$5,646,383</b>

**University of Waterloo**

Developing an Innovative P Sensor Suite for Catchment Water Quality Monitoring: Identifying Hotspots and Hotmoments	\$50,000
Advanced Material Characterization of Next Generation Automotive Materials for Improved Crash Performance	\$50,000
Muscle Metabolism in Health and Disease	\$109,000
Engineered Electrode Materials for Electrochemical Energy Storage	\$100,000
Apparatus for High-Recall Information Retrieval	\$67,832
CrowdCurio: Infrastructure for Research-Oriented Crowdsourcing	\$55,000
Wideband Data Links for the Zettabyte Era	\$100,000
Therapeutic Exercise to Promote Health for Older Adults with Arthritis	\$100,782

## .../University of Waterloo

Innovation in Additive Manufacturing via Intelligent Adaptive Processes	\$110,000
Optical Diagnostic System for Characterizing Energetic Nanomaterial	\$50,000
<b>10 projects</b>	<b>\$792,614</b>

## University of Western Ontario (The)

Equipment for Bilateral Hearing Assessment of Cochlear Implant Subjects	\$200,000
Mechanobiological Solutions to Joint Injury and Degeneration	\$320,000
An Integrated Platform for Modeling Neurodegenerative Diseases	\$196,512
PhilNet: A Research Tool for Digital Philosophy	\$200,000
<b>4 projects</b>	<b>\$916,512</b>

## University of Windsor

Analytical and Semi-preparative HPLC	\$21,000
Virtual Communication System for Reciprocal Learning and Research between Canada and China	\$32,000
<b>2 projects</b>	<b>\$53,000</b>

## Wilfrid Laurier University

Infrastructure for the Analysis Appetite-regulation	\$43,737
Geographic Information Observatories for Environmental Change Analytics	\$72,433
The Community-Based Research Media Lab	\$49,964
<b>3 projects</b>	<b>\$166,134</b>

## York University

Establishment of the Innovative Water Technology and Energy Research Laboratory	\$150,000
York Research Facility for Autonomous Unmanned Vehicles	\$171,968
A Facility for the Interdisciplinary Study of Freshwater Ecosystems and Environmental Change	\$150,000
Sexual Health and Relationships Lab	\$94,302
Canada Labour Code Data Analysis Infrastructure (CLC-DAI)	\$131,793
<b>5 projects</b>	<b>\$698,063</b>

### NOTE:

As part of this announcement, an additional \$4,616,360 was awarded under the Infrastructure Operating Fund (IOF), a mechanism that assists institutions with the incremental operating and maintenance costs associated with the new infrastructure.