

**John R. Evans Leaders Fund / Fonds des leaders John-R.-Evans
 Backgrounder / Fiche d'information**

Ontario

The Canada Foundation for Innovation (CFI) Board of Directors approved a contribution of \$27,342,930 to support 125 infrastructure projects in the province. / Le conseil d'administration de la Fondation canadienne pour l'innovation (FCI) a approuvé des contributions totalisant 27 342 930 \$ en vue d'appuyer 125 projets d'infrastructure dans la province.

Project Title / Titre du projet	Maximum CFI Contribution / Contribution maximale de la FCI
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Carleton University

Monitoring of Emerging Water Pollutants and Development of Next-generation Sensors	\$254,395
Water and Ice Research Lab, the sequel: A whole new WIRL	\$109,999
A Hardware-in-the-loop Test Facility for Space Robotics	\$75,001
Interactive Animal Flight and Dynamic Behaviour Laboratory	\$146,000
LC-TOF MS for Enhanced Chemical Contaminant Risk Characterization	\$125,000
Digital Tools for Documentation and Renewal of Global Endangered Languages	\$64,000
Design and Development of Machine Learning Aided 5G & Beyond-5G Wireless Networks using Software Defined Radio Nodes	\$150,000
7 projects / projets	\$924,395

Lakehead University

Design and Development of Diagnostic and Therapeutic Drug Candidates	\$98,655
1 project / projet	\$98,655

Laurentian University / Université Laurentienne

Environmental Geophysical Infrastructure for Understanding Permafrost Change and Biogeochemical Feed-backs	\$255,835
1 project / projet	\$255,835

McMaster University

Minimal Residual Disease (MRD) Research Laboratory to Target Acute Myeloid Leukemia	\$250,000
Optical and Wearable Motion Capture System for Precision Medicine Solutions in Osteoarthritis	\$80,000
Cerebrovascular Hemodynamics in Health and Disease	\$160,000
Optical Imaging in the Pre-clinical Setting	\$467,800
Dynamic Nanoimaging of DNA Damage and Repair in Neurodegenerative Diseases	\$800,000
AI-enhanced Mobility Lab	\$102,579
Structural Biology Platform for Infectious Disease Research	\$736,800
Diet-microbiota Lab for the Treatment and Prevention of Inflammatory Bowel Disease and Food Sensitivities	\$230,000
Tallos 120C Transmission Electron Microscope for Advanced Steel Metallurgy	\$430,000
Laboratory of High-content Bioimaging for Organ-on-a-chip Systems	\$150,000
10 projects / projets	\$3,407,179

Ontario College of Art and Design

kinādās: Walking About on the Land	\$29,500
Digital Non-fiction Research Cluster	\$29,500
2 projects / projets	\$59,000

Queen's University

Evolutionary Genetics of Plant Reproductive Strategies	\$130,000
Advancing Detection Limits and In Situ Isotopic Chemical Chromatography for Astroparticle and Geochemical Research	\$200,000
Stress-mediated Trophoblast Proliferation: Adaptation or Pathology?	\$100,000
The Northern Environmental Geoscience Laboratory	\$100,000
Membrane Remodelling by Positive-sense RNA Viruses: Molecular Mechanisms and Cellular Responses	\$150,000
Characterization of Immunological Mechanisms Underlying Evasion of Checkpoint Blockade in Non-small Cell Lung Cancer	\$200,000
Elucidating the Evolutionary Enhancement of Enzymatic Efficiency	\$144,000
Nano-materials-based Wearable Sensors and Electronics: Achieving Superior Performance and Visual Imperceptibility	\$100,000
Research Center to Study Cancer with Single Cell Resolution	\$240,000
Visualizing Soft Surfaces using Scanning Probe Microscopy	\$180,000

... / Queen's University

Source to Sink Transport Dynamics: Exploring Evolution of Deltaic and Deepwater Systems through Physical Modelling	\$75,001
A Secure and Privacy-preserving Edge Caching Framework in Next-generation Mobile Networks	\$125,000
Intelligent Mining Systems and Mine Automation	\$125,000
Advancing Edge, Cyber-physical, and Autonomous Systems for Smart Infrastructure	\$400,000
Investigating Representational Reorganization in Memory	\$100,000
15 projects / projets	\$2,369,001

Ryerson University

Advanced Design and Measurement Facility for Adaptive Metamaterials	\$78,000
Machine Learning and Artificial Intelligence for Smarter IoT	\$75,477
Protein Crystallization and Molecular Characterization Platform	\$78,000
Advanced Graphene Oxide-based Porous Materials for Water Treatment	\$76,000
Isotopic Water Sampling and Analyzer Systems for Tracing Water Movement through Urban Landscapes	\$82,876
5 projects / projets	\$390,353

Trent University

Infrastructure to Study the Movement Ecology of Declining Avian Taxa	\$62,950
Molecular and Biochemical Studies of Giardia Intestinalis	\$69,845
The Trent Social Relations, Attitudes and Diversity Lab	\$196,679
The Integrative Fish Ecology Laboratory	\$74,944
4 projects / projets	\$404,418

University of Guelph

Versatile Platform for Measuring Molecular Structure and Conformation of Linear and Branched Biopolymers	\$124,586
Integrated Soil Sensing and Mapping for Optimized Management of Land Resources	\$209,957
Graphite Furnace for Catalytic Pyrolysis of Biocarbon from Waste Biomass: Engineering Biographite for Biocomposite Uses	\$214,174
Microorganisms in a Changing Climate: Fate and Flux of Thawing Permafrost Carbon	\$90,000
Application of Metabolomics and Proteomics in Environmental Toxicology	\$102,000
5 projects / projets	\$740,717

University of Ontario Institute of Technology

Climatic Human Factors & Performance Laboratory	\$160,061
1 project / projet	\$160,061

University of Ottawa / Université d'Ottawa

Development and Application of Isotope Tracers for Geolocation and Surface Hydrology	\$331,360
Zebrafish as a Preclinical Platform for Modeling Childhood Cancers and Rare Genetic Disorders	\$464,952
Elucidating the Basis of Photosynthetic Adaptations to Extreme Conditions	\$202,060
Ottawa Pre-clinical PET/CT Imaging Core	\$784,439
Ecological Evolutionary Developmental Genetics: Flies and Ants as Model and Supermodel Organisms	\$187,437
AI-backed Internet of Vehicles Laboratory: An Open Access Innovation Facility	\$293,164
6 projects / projets	\$2,263,412

University of Toronto

Chemspeed Automated Chemical Synthesis System	\$480,000
DNA Nanotechnology for Spatially-programmed Immune Receptor Activation	\$100,000
Mass Transport In Earth's Lithosphere, Revealed by In-situ LA-ICP-MS Micro-analyses	\$200,000
Infrastructure for Canadian National Caries Network	\$148,089
Advanced Scanning Electron Microscope for In Situ and Liquid-phase Electron Microscopy Study	\$200,000
Neural Circuit Changes in Decision-making Across the Lifespan - Relevance to Mental Health Disorders	\$180,000
Recovery and Recuperation: Mobilizing the Next Generation of GRASAC	\$76,129
Extracellular Vesicle and Patient Avatar Technology Cores for Translational and Clinical Research	\$449,355
Charting Diversity in Brain Maturation	\$161,556
Defining Cancer and Immune Landscapes in Multiple Myeloma using Single Cell Transcriptomics and Ultradeep DNA Sequencing	\$763,136
Sleep and Human Evolution Lab (SHEL): Testing Evolutionary Hypotheses in a Clinical, Controlled Space	\$151,714
Computer Systems Support for Machine Learning and Artificial Intelligence	\$120,000
Autonomous Mobile Manipulation in Human Environments: Learning Algorithms and Robot Systems	\$176,000
Autonomous Docking and Active Perception for Unmanned Aerial Vehicles	\$150,000

... / University of Toronto

Next Generation Polymeric Microparticles for the Treatment of Osteoarthritis	\$175,722
Psychosis Research Lab: Assessment of Biological, Psychological, and Behavioural Factors Associated with Psychosis	\$133,500
Immersive Interaction and Morphological Control for Continuum Robot Systems	\$300,000
Linking Neural and Vascular Aging in the Brain: From Biophysics to Cognition	\$156,353
Detector Prototype Units for Long-lived Particle Searches	\$200,000
A Non Invasive Approach to Visualizing Tumour Growth in Vivo through Space and Time	\$469,907
Sensory-cognitive Listening Assessment to Transform Hearing Loss Outcomes	\$192,376
Readout the Answers	\$218,986
Robotics Infrastructure for Smart Manufacturing (RISM)	\$440,474
In-depth 2D and Whole Tissue 3D Detection of Tissue Fibro-inflammation in Metabolic Diseases	\$757,242
Cardiac Regeneration and in vitro Disease Modeling	\$246,923
A Research Program to Study the Role of Fibroblasts in the Pathogenesis of Idiopathic Pulmonary Fibrosis	\$300,000
A Shift in Paradigm: Novel Stratification System for Critical Illness	\$383,311
Tracking Down Neurodegeneration in the Human Brain: From Functional Systems to the Subcellular Level	\$383,550
Trustworthy Machine Learning	\$100,000
Microplastic Sources, Fate and Effects Research Laboratory	\$169,612
Advanced Imaging of Mouse Development: Early Adversity and Brain Health	\$435,895
Active Learning Research Labs	\$800,000
Mapping Genotypes to Phenotypes and Phenotypes to Fitness	\$320,000
33 projects / projets	\$9,539,830

University of Waterloo

Transmission Electron Microscope	\$800,000
Infrastructure for Large-scale Integration and Processing of Structured and Graph Data	\$85,000
Neural Substrates of Cognitive Influence over Sensory-motor Control: Implications for Learning and Stroke Rehabilitation	\$100,000
Security Evaluation and Synthesis for Smart Devices	\$88,492
Enabling Toughening and Damage Tolerance in Adhesive Bonding of Multi-material Lightweight Structures	\$100,000
Physics-based Visual Computing Infrastructure	\$84,000

... / University of Waterloo

A Dynamic Force and Motion Simulator for Characterizing Spine Biomechanics Under Complex Loading	\$160,000
Plant Phenomics: Understanding Trait Covariation Across Scales	\$160,000
Integrated Device-driven Approaches for Automated, Real-time Tracking	\$160,000
The StoryBoard Lab	\$101,368
Supporting Sustainable Aviation through Pilot Training and Visual Standard Innovations using a Flight Simulation Device	\$150,000
Analysis of PFAS by Combustion Ion Chromatography: Investigation of PFAS Occurrence, Fate, and Mitigation Strategies	\$80,000
12 projects / projets	\$2,068,860

University of Western Ontario (The)

600 MHz NMR Spectrometer	\$732,466
Mobile LiDAR System for Geologic Applications	\$193,946
Mechanics of Active Fluids and Bacterial Physics Laboratory	\$204,282
Engineering Materials: Advancing in-Situ Electron Diffraction and Imaging Techniques (Engine-Tec)	\$249,135
Nanostructured Membrane Fabrication and Characterization Facility	\$200,000
Decision Making Laboratory	\$232,171
Characterising Sound and Vibration-based Communication Systems	\$219,491
In Vivo Neurochemistry Laboratory	\$219,218
Equipment for Advanced UAV-based Hyperspectral Remote Sensing	\$157,278
Infrastructure for the Characterization of Proteins and their Modifications in Health and Diseases	\$800,000
10 projects / projets	\$3,207,987

University of Windsor

Attosecond Nanoscopy	\$77,760
Confocal Imaging Infrastructure for Cell Biology and Biochemistry	\$140,660
Real-time Traffic Monitoring System for Studying Traffic at Canada's Busiest Land Border Crossing	\$75,001
3 projects / projets	\$293,421

Wilfrid Laurier University

Haven: The Asylum Lab	\$68,427
Environmentally Controlled Growth System and Molecular Phenotyping Platform for Plant Immunity Research	\$71,976

... / Wilfrid Laurier University

From Dish to Fish: Supporting Farmed Fish Health in Canada	\$91,343
Individually Ventilated Caging Systems to Support Animal Research	\$199,000
4 projects / projets	\$430,746

York University

Integrative Sociobiology and Pollinator Health: Wild Bee Ecology, Evolution and Genomics	\$100,000
Flux Measurements of Atmospheric Nitrous Acid (HONO) by Time-of-Flight Chemical Ionisation Mass Spectrometry (ToF-CIMS)	\$160,000
Infrastructure to Research and Engineer Specialized Metabolism in Plants	\$75,010
Hemispheric Encounters: Developing Transborder Research-creation Practices	\$103,050
CineMobilieria	\$191,000
Wild Garden Media Centre for Interdisciplinary and Multimedia Research Support	\$100,000
6 projects / projets	\$729,060

NOTE:

As part of this announcement, an additional \$8,202,879 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.

À NOTER :

Cette annonce comprend l'attribution d'une somme additionnelle de 8 202 879 dollars du Fonds d'exploitation des infrastructures. Les établissements utilisent ces montants pour assumer une partie des coûts d'exploitation et de maintenance de la nouvelle infrastructure.