

**Fonds des leaders John-R.-Evans**  
**Fiche d'information**

**Ontario**

Le conseil d'administration de la Fondation canadienne pour l'innovation (FCI) a approuvé des contributions totalisant 48 750 467 \$ en vue d'appuyer 166 projets d'infrastructure dans la province.

<b>Titre du projet</b>	<b>Contribution maximale de la FCI</b>
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**Brock University**

Exercise and environmental physiology laboratory	74 071 \$
Cybersecurity and Critical Intelligent Infrastructure (C2I2) lab	46 310 \$
<b>2 projets</b>	<b>120 381 \$</b>

**Carleton University**

Upcycling plastic waste using yeast fermentation	100 000 \$
Infrastructure to support a synthetic energetic materials laboratory	100 000 \$
Student absenteeism and child mental health in the post-pandemic era	34 014 \$
Sonic arts participation lab	50 581 \$
Sensors for multi-scale laboratory experiments on soils	94 837 \$
Lowering the burden: Identifying metabolic costs of stress to improve resilience	314 999 \$
Inter-generational impact of maternal obesity on structure and function of skeletal muscle	96 462 \$
Digital Workflows for Assessment of the Built Environment (DWABE)	322 038 \$
Metal mobilization from thawing permafrost	150 000 \$
<b>9 projets</b>	<b>1 262 931 \$</b>

**Lakehead University**

Advancing Canadian built-environment sustainability and resiliency: A multiscale wind tunnel facility	176 000 \$
<b>1 projet</b>	<b>176 000 \$</b>

**McMaster University**

The integrated AI-driven antibiotic discovery platform	205 048 \$
Community-engaged laboratory for creative methodologies (Co-Create Lab)	137 986 \$
Germline-somatic associations in cancer	211 754 \$

McMaster aptamer laboratory	768 442 \$
Thermal analyses of advanced high performance materials	180 000 \$
Expansion and upgrade of McMaster Decision Science Laboratory (McDSL)	75 000 \$
Advancing Canada's sustainable energy future through characterization of reactive fluid-rock interactions	127 500 \$
Infrastructure for versatile integration of photonic materials and chips enabling their transition from lab to product	748 166 \$
Observatory for social science, humanities and arts contribution to public and social sector innovation and impact	122 932 \$
The study of microbiome-host interactions and development of therapies for chronic diseases.	776 560 \$
Materials for Anchoring and Penetration Laboratory (MAPL)	83 500 \$
<b>11 projets</b>	<b>3 436 888 \$</b>

## Ontario College of Art and Design (OCAD University)

OCADU sustainable colour lab	73 873 \$
Bio art and living materials lab	36 711 \$
<b>2 projets</b>	<b>110 584 \$</b>

## Queen's University

Advanced fault detection for software-controlled aerospace and automotive systems	90 000 \$
Uncovering the temporal dynamics of selective attention	119 200 \$
Towards sustainable open source software and developer productivity	90 000 \$
Investigation of biomarkers and novel therapeutic targets in spondyloarthritis	100 000 \$
<b>4 projets</b>	<b>399 200 \$</b>

## Toronto Metropolitan University

Advanced co-operative mobile robotic manipulation test facility	76 000 \$
Innovative waste-to-bioenergy technologies for Water Research for Resource Recovery (WR3) laboratory	76 000 \$
Digitizing black history	76 000 \$
Integrated solutions for PFAS removal in wastewater: Advanced materials, biological processes, and hybrid technologies	84 520 \$
Quantum sensor for multi-cancer early diagnosis	395 000 \$
<b>5 projets</b>	<b>707 520 \$</b>

## Trent University

Environmental and bio-polymer materials characterization facility	149 049 \$
A state of the art rodent suite to study skeletal muscle and adipose tissue	99 104 \$

physiology	
Nitrogen in the environment: A delicate balance	135 338 \$
Decoding sound: Using electroencephalography to explore hearing loss and communication	70 704 \$
Integrative metabolic measures of temperature stress in mammals	83 593 \$
<b>5 projets</b>	<b>537 788 \$</b>

#### University of Guelph

Structure-guided development of oligonucleotides for biosensing and therapeutic applications	79 738 \$
The effects of autonomic nervous activity on cerebral blood flow regulation in health and disease	80 532 \$
Structural dynamics of deadenylases and nucleic acid clients	80 533 \$
An integrated database for the 1931 census and linked sources	127 382 \$
Antifungal resistance in dermatophytes: From genomics to clinical implications	78 413 \$
Infrastructure for genetic engineering and high-content imaging in neurodevelopmental models	97 555 \$
Environmental and evolutionary physiology of fish respiration	80 532 \$
<b>7 projets</b>	<b>624 685 \$</b>

#### University of Ontario Institute of Technology

Advanced performance testing platform for emerging vehicles in adverse weather	180 600 \$
Supercharging the electrochemical materials lab	168 422 \$
Advanced nanofabrication facility for quantum and energy materials research	135 000 \$
Mobile and lab-based infrastructure to enable advanced proactive ergonomics analyses	176 252 \$
<b>4 projets</b>	<b>660 274 \$</b>

#### Université d'Ottawa

Electrochemical and thermochemical production and use of sustainable hydrogen	200 000 \$
Developing, implementing, and evaluating advanced artificial intelligence models for health systems	264 436 \$
Using stress physiology and behaviour to inform salmonid fisheries and aquaculture in Canada	359 700 \$
Real-time monitoring of quantum molecular dynamics	484 999 \$
Improving access to rehabilitation services for people living with complex rehabilitation needs using telerehabilitation	154 776 \$
Evolving phage endolysins against multidrug-resistant bacteria	119 040 \$
Investigating microbiome-driven health disorders in humans using the SHIME gut system	140 028 \$

<b>7 projets</b>	<b>1 722 979 \$</b>
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### University of Toronto

Improving vaccine efficacy through novel antigen design and quantitative tools	150 000 \$
Simulating Planets Like Earth: SimPLE Lab	164 000 \$
LIFT-AI: Leveraging AI for transplant longevity or long-term survival	396 237 \$
Isoform-resolution functional genomics in health and disease	249 980 \$
Precision metrology with a continuously operating optical lattice clock	680 000 \$
Physiology and mechanisms of stress in skeletal muscle and pancreatic islets	240 000 \$
Integrated design for digital fabrication in mass timber engineering and construction	100 000 \$
The role of extracellular vesicle (EV)-mediated crosstalk between cancer cells and platelets and in tumor progression	800 000 \$
Hardware for advanced 7T imaging of the human brain	400 000 \$
Synthetic biology-based micro/nanoscale sensing systems for antimicrobial resistance	165 000 \$
Understanding mechanical force effects on immune cell biology	243 257 \$
Water resources management from data to decisions	100 000 \$
Decoding neural network dynamics driving relapse in opioid use disorder	454 409 \$
Advanced driving simulation to support the safe and independent mobility of older adults	408 086 \$
Community Design and Advocacy Space (CDAS) – Co-designing technologies to support marginalized workers	126 889 \$
Investigating lifestyle and sex-specific factors in the incidence and progression of multiple sclerosis	358 562 \$
Molecular and cellular determinants of memory function and dysfunction	752 368 \$
Assimilation and un-assimilation: Indigeneity across the Canadian censuses from 1861 to the present	56 500 \$
Biocultural Lab for the study of Inequality and Social Stress (BLISS)	100 000 \$
From neurons to networks: Modelling functional and structural neurovascular dysfunction in Alzheimer's disease	697 437 \$
Studying behavioural adaptations in parallel pathways of the visual system using expansion microscopy	162 500 \$
Target validation for repeat expansion disorders	260 000 \$
Physics constrained neural fields for scientific imaging	200 000 \$
A closed-loop system for collaborative and continual development of large language models	250 000 \$
INSPIRE Music Lab	400 000 \$
Bridging the gap between human and artificial intelligence: Custom architectures for human-AI collaboration	96 000 \$
Advanced instrumentation for revolutionizing northern human-environment	157 900 \$

coevolution	
Structure guided engineering of cellular signalling	465 000 \$
Advanced multifunctional powder synthesis, coating, component manufacturing, and material characterization facilities	800 000 \$
Genome maintenance biology in cells and tissues	625 744 \$
A Single-cell analysis lab to investigate the aging mechanisms of oligodendrocyte precursor cells	175 480 \$
Elucidating the cellular and molecular mechanisms underlying cardiac tissue patterning and morphogenesis	360 000 \$
Smart surfaces for building energy efficiency and carbon capture	400 000 \$
Building a comprehensive understanding of urban environmental change: Infrastructure for interdisciplinary research	158 520 \$
Understanding complex microbiomes using ultrahigh-throughput experimentation	156 404 \$
Automated microbial isolation and characterization platform for microbiome-based therapeutics and bioprocesses	400 000 \$
Elucidation of endothelial and epithelial functions in chronic disease using advanced light microscopy methods	556 956 \$
Next generation platforms for immune-competent organoid models of human disease	762 062 \$
Life course determinants of cardiovascular health: A comprehensive approach from preconception to childhood	195 000 \$
Single-molecule imaging in cells and cellular assemblies	185 935 \$
Advanced metabolomics for cancer therapy and metabolite discovery	800 000 \$
Process intensification for electrochemical manufacturing	193 808 \$
Chemical biology platform for drug discovery	720 020 \$
The role of the microbiome in maternal and child health	693 034 \$
Foundational world models and efficient reward learning for robotics	164 862 \$
Creating inclusive play opportunities in pediatric healthcare environments	43 915 \$
The chemical cognition lab: AI-driven tools and robotics for chemical innovation	164 862 \$
Advanced analysis rock and mineral processing facility	159 983 \$
Molecular to material scale characterization of protein assemblies	320 000 \$
New building blocks and architectures to empower superconducting quantum computing	800 000 \$
Hollow fiber membrane development for energy-efficient brine treatment	400 000 \$
ZPEL: Innovating power conversion for a sustainable future	164 772 \$
<b>52 projets</b>	<b>18 035 482 \$</b>

## University of Waterloo

Understanding the basic biophysical mechanisms by which neuroinflammation leads to neurodegeneration	200 000 \$
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Superconducting millimeter-wave circuits for quantum applications	80 000 \$
Mechanically crosslinked networks: Structure-property relationships and applications in batteries	109 000 \$
Development of a modular biomechanics laboratory to quantify, assess, and (re)train movement from lab-to-clinic-to-field	110 000 \$
Enriching the linguistic diversity of open language models	168 004 \$
Socio-cognitive foundations of human-machine interactions	180 000 \$
Progressive internalization of skills for advanced language model reasoning	96 000 \$
Platform for advanced experiments with superconducting quantum devices	421 000 \$
Rational design of sustainable and nano-enabled multiphase polymers	258 000 \$
Reconfigurable converter platform for design, protection and contro of modern power grids	154 204 \$
High-speed and efficient integrated circuits for next generation computing systems	100 000 \$
GPU accelerated numerical simulations for oceanographic applications	160 000 \$
Serving systems for large language models with low latency, high utilization, good scalability, and low carbon emissions	195 069 \$
Privacy-aware language agents via post-deployment learning and adaptation	80 000 \$
Invisible threats, visible solutions: Advancing water quality management through micropollutant analysis	125 000 \$
Atomic layer etcher for enhanced quantum technology devices	579 016 \$
Architecture exploration and design tools for next-generation reconfigurable acceleration devices	80 000 \$
Addressing urban (over)heating in a warming climate	78 000 \$
Fast spectral imaging of fire emissions	125 000 \$
Exploring many-body physics with language models	160 000 \$
Digital infrastructure for motion capture	80 000 \$
Feminist interdisciplinary research lab	105 000 \$
Elevated- to high-rate characterization facility for advanced lightweight materials and structures	115 000 \$
Framework for advancing aerosol metrics to improve air quality and health	95 000 \$
Technologies enabling nature-inspired architected materials and structures	375 750 \$
Raman spectroscopy for multidimensional and ultrasensitive chemical analysis of live biological subjects	100 000 \$
<b>26 projets</b>	<b>4 329 043 \$</b>

## University of Western Ontario (The)

Western accessible instruments lab	133 447 \$
Emerging RNA viruses' impact on brain function	800 000 \$
Sustainable resource management lab - tracking nutrients in the city	267 274 \$

Advancing innovations in social communication in aging and dementia through technology-based outcomes and interventions	176 382 \$
A pain research suite	260 549 \$
Gas flux measurements to animate carbon and nitrogen cycling models	187 741 \$
Consumer and Organizational Behaviour (COB) lab	42 152 \$
Investigating the impact of cellular stress response pathways on whole-body metabolism	142 460 \$
Non-invasive geophysical monitoring of geo-environmental processes	198 560 \$
A fabrication and characterization platform for AI-driven design of personalized electronic skins	266 884 \$
High resolution mass spectrometer for mapping host-microbe metabolism	307 799 \$
The Fostering Resilience through Audiovisual Media and Engaged Scholarship (FRAMES) collaboration space	64 000 \$
Reconfigurable intelligent surface empowered smart radio environment for AI-driven next generation wireless networks	235 359 \$
Small-world systems for AI-enhanced analysis of naturalistic behaviour and underlying brain activity	316 160 \$
<b>14 projets</b>	<b>3 398 767 \$</b>

#### University of Windsor

Advanced characterization and development of new (bio)materials through x-ray scattering	150 000 \$
Innovative platform for rapid and cost-effective biomolecular synthesis and characterization	137 000 \$
Resilience and sustainability assessment of geotechnical infrastructure	76 699 \$
Bioacoustics infrastructure for innovative field studies of ecology and conservation of migratory birds	75 001 \$
<b>4 projets</b>	<b>438 700 \$</b>

#### York University

Establishment of Health Equity and AI Lab (HEAL)	96 000 \$
Futuristic infrastructures for AI framework: Pioneering self-healing cloud and smart cities	75 120 \$
Walking while talking: Assessing the interplay between age, distraction, and mobility	72 422 \$
Additive manufacturing for next generation space systems and robotics	144 632 \$
A novel laboratory to investigate cardiorespiratory function and perceived dyspnea during physiological stress in humans	138 000 \$
Interrogating plasticity of electro-chemical synapses using multiphoton imaging microscopy	200 000 \$
Research infrastructure to initiate the York University community water hub	140 000 \$



Molecular interactions and structures at solid/liquid interfaces for environmental applications	149 000 \$
A novel laboratory to study sarcopenia and the neuromuscular control of movement across the ageing spectrum	80 000 \$
Neurodevelopmental-intervention testing suite to identify and prevent transdiagnostic risk for mental health challenges	120 000 \$
Refugee law lab: Algorithmic justice for people on the move	23 963 \$
Cortical networks for natural sensorimotor behaviours	200 000 \$
Integrated platform for high resolution analyses of stem cells and tissues in response to metabolic pre-conditioning	100 000 \$
<b>13 projets</b>	<b>1 539 137 \$</b>

**À NOTER :**

Cette annonce comprend l'attribution d'une somme additionnelle de 11 250 108 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.