

# Cœur + AVC Lauréats des subventions de recherche 2023-2024

Cœur + AVC est heureuse d'annoncer les lauréats des subventions de recherche 2023-2024!

Pour le concours 2023-2024 (automne 2022) :

- Cœur + AVC a reçu 175 demandes de subvention de recherche.
- À la suite des processus rigoureux d'examen par les pairs et du budget de Cœur + AVC, les 66 demandes ayant reçu la meilleure cote ont été financées. Cela représente un taux de réussite de 38 % et un investissement total de 17 218 975 \$.
- Chaque projet financé a une durée moyenne de 2,91 ans et reçoit un montant moyen de 260 893,56 \$.
- Lors de la saison 2023-2024 de l'examen par les pairs, plus de 130 membres de la communauté de la recherche ont donné de leur temps et de leur expertise au processus d'examen par les pairs.

#### Ahmed, Sofia (University of Calgary)

Exogenous estrogen and cardiovascular risk in transgender women

#### Al Batran, Rami (Université de Montréal)

Investigating the Short- and Long-term Effects of Ketogenic Diet on Atherosclerosis

#### Archer, Stephen (Queen's University)

The role of Dynamin 2 as a novel regulator of mitochondrial fission in human and experimental pulmonary arterial hypertension: Epigenetic regulation and therapeutic implications.

**Bartoszko, Justyna** (University Health Network) Co-PI: Karkouti, Keyvan Post-operative intravenous iron to treat iron-deficiency anemia in patients undergoing cardiac surgery: A pilot, multi-centre, placebo-controlled randomized trial

#### Beaulieu, Christian (University of Alberta)

Advanced Diffusion MRI of Brain Injury After Stroke

**Bendeck, Michelle** (University of Toronto) Co-PI: Santerre, Paul Peptide Coated Nanoparticles to Inhibit Vascular Stenosis

#### Bertagnolli, Mariane (McGill University)

Postpartum Cardio-obstetric Rehabilitation After Hypertensive Pregnancy



#### Boulos, Mark (Sunnybrook Health Sciences Centre)

Effect of Genotype-Guided Oral P2Y12 Inhibitor Selection vs Conventional Clopidogrel Therapy in Symptomatic Intracranial Atherosclerotic Disease (NUANCE-ICAD)

# Caniggia, Isabella (Samuel Lunenfeld Research Institute of Mount Sinai Hospital)

Compromised maternal cardiovascular system in preeclampsia is due to sphingolipid-induced alteration in mitochondrial dynamics

#### Cepinskas, Gediminas (Lawson Health Research Institute)

Co-PI: Fraser, Douglas

Human COVID-19 Endotheliopathy: Identification of Immuno-Thrombotic Mechanisms

# Chauhan, Vijay (University Health Network)

Structural and functional determinants of novel ECG risk markers in patients with cardiomyopathy

# Chen, Joyce (University of Toronto)

Discovering the potential for motor recovery in people living with stroke

#### Chew, Derek (University of Calgary)

Identifying Opportunities to Improve Quality Care Delivery Among Individuals with Atrial Fibrillation

#### Choy, Jonathan (Simon Fraser University)

The gut microbiota in transplant vascular injury: Immune mechanisms and therapeutic modifications

# **Dakshinamurti, Shyamala** (University of Manitoba)

Rapid Receptor - G Protein Switching: a toxic effect of oxygen therapy in pulmonary hypertension

#### **Dixon, Ian** (University of Manitoba)

Tailoring pro-regenerative fibroblasts for integration to ECM scaffolds to make living valves

#### Dlamini, Nomazulu (Hospital for Sick Children) Co-PI: Seed, Michael

The Vascular Endothelial Dysfunction and Cognition in Early Life Study (VESCELS)

#### **Dyck, Jason** (University of Alberta)

Mitochondrial Spare Respiratory Capacity and Heart Failure

#### **EIAII, Ayman** (Université Laval)

Elucidate the role of KLF4 in regulating mural cell contribution to tissue repair after stroke

# Gallagher, Anne (Université de Montréal) Co-PI: Simard, Marie-Noelle

A parent-child Yoga intervention for reducing attention deficits in children with CHD: a feasibility study prior to a randomized controlled trial

#### Giacca, Adria (University of Toronto)

Insulin-mediated actions of GLP-1 receptor agonists on restenosis and atherosclerosis



**Gioia, Laura** (Centre hospitalier de l'université de Montréal) Co-PI: Stapf, Christian Biomarkers Analysis Study in Ischemic Stroke due to a Large-Vessel Occlusion (BASIS-LVO)

#### Gordon, Joseph (University of Manitoba)

Molecular regulation of cardiac remodeling by Nix during obesity- and diabetes-related heart disease.

#### **Gramolini, Anthony** (University of Toronto)

Genetic mutations in phospholamban highlight protein degradation defects in cardiomyopathies

**Griesdale, Donald** (University of British Columbia) Co-PI: Thiara, Shananjit Characterization of cerebral blood flow and neurological injury in severe acute respiratory distress syndrome and the implications of veno-venous extracorporeal membrane oxygenation

#### Kriz, Jasna (Université Laval)

Therapeutic reprogramming of microglia after stroke: identifying sex- and age-dependent immune targets

# Lagace, Thomas (University of Ottawa Heart Institute)

Role of PCSK9 proteolytic processing in inflammation

#### Luong, Christina (University of British Columbia)

Machine Learning Empowered Cardiac Ultrasound for the Management of Acute Coronary Syndrome

#### MacVicar, Brian (University of British Columbia)

Investigating the role of P2Y14 receptor-mediated vessel constriction in stroke

**Mann, Koren** (Lady Davis Institute for Medical Research) Co-PI: Ding, Jun *Identification of modulators of atherosclerotic plaque progression in the context of arsenic* 

#### Marcotte, Karine (Université de Montréal)

Expressive discourse in French-speaking people with aphasia: A reliability and longitudinal study

#### Martel, Catherine (Université de Montréal)

Platelet extracellular vesicles as a therapeutic option in atherosclerosis-related lymphatic dysfunction

#### Martino, Tami (University of Guelph)

Targeting Circadian Nuclear Receptors - A Novel Treatment for Heart Disease

#### Mavrakanas, Thomas (McGill University Health Center Research Institute)

Co-PI: Sharma, Abhinav

Efficacy and safety of canagliflozin in advanced renal disease



#### McIntyre, William (McMaster University)

Polygenic Risk Scores for Predicting the Incidence and Recurrence of New-Onset Postoperative Atrial Fibrillation In Cardiac Surgery Patients

**Mehta, Swati** (Lawson Health Research Institute) Co-PI: Teasell, Robert Internet-delivered cognitive behaviour therapy for persons with stroke: Randomized controlled trial

#### Miao, Qun (Grace) (Children's Hospital of Eastern Ontario)

Racial variations and socioeconomic inequities in healthcare utilization and mortality among infants with congenital heart disease: a mixed methods study

**Millar, Philip** (University of Guelph) Co-PI: Burr, Jamie Understanding neural control of blood pressure following acute cannabis use

#### Nattel, Stanley (Montreal Heart Institute)

The role of cellular senescence in age-dependent cardiac remodeling and atrial fibrillation

#### Nazy, Ishac (McMaster University)

Characterizing the biochemical and temporal aspects of COVID-19 vaccine-induced immune thrombocytopenia antibodies

# Ni, Heyu (St. Michael's Hospital)

The PSI domain of β3 integrin: A novel mechanism and target for anti-thrombotic therapy

#### Noiseux, Nicolas (Centre hospitalier de l'université de Montréal)

Co-PI: Noly, Pierre Emmanuel

Creating new opportunities for the transplantation of hearts donated after declaration of circulatory death by combining normothermic regional perfusion and novel pharmacological treatments

#### Pare, Guillaume (McMaster University)

Genetic and epigenetic determinants of very early, fatal coronary artery disease

#### Parent, Lucie (Université de Montréal)

REGULATION OF SK CHANNELS IN THE DISEASED HEART

# Ravandi, Amir (St. Boniface General Hospital Research Centre)

Identification of a novel drug platform to treat myocardial reperfusion injury

# Rivard, Léna (Montreal Heart Institute) Co-PI: Tadros, Rafik

Prevalence and clinical implications of pathogenic variants in isolated early-onset atrial fibrillation: A genetics substudy of the BRAIN-AF clinical trial

#### Rotstein, Benjamin (University of Ottawa Heart Institute)

Imaging Cardiac Autonomic Function in Heart Failure

#### Ruben, Peter (Simon Fraser University)

Voltage-gated sodium channels are a potential therapeutic target against inflammation-induced cardiac arrhythmias



**Samuel, Michelle** (Institut de Cardiologie de Montréal) Co-PI: Sapp, John *Prospective cohort for the sEcoNDary prevention of Ventricular Tachycardia in patients with cardiomyopathies (END-VT) study* 

#### **Sekhon, Mypinder** (University of British Columbia)

The role of interleukin-1 beta and the NLRP3 inflammasome in secondary cerebral injury in humans with hypoxic ischemic brain injury after cardiac arrest

# **Shaw, Gary** (University of Western Ontario) Calcium Sensor Proteins in Cardiac Muscle Repair

**Shoichet, Molly** (University of Toronto) Co-PI: Morshead, Cindi *Modulation of the Brain Microenvironment for Stroke Recovery* 

# Spence, Jessica (McMaster University) Co-PI: Lee, Shun Fu

Benzodiazepine-free cardiac anesthesia for reduction of postoperative delirium in the intensive care unit (B-Free): A multicentre, randomized, cluster crossover trial

#### **Stewart, Alexandre** (University of Ottawa Heart Institute)

Macrophage-derived growth factor that protects against endotoxin-induced QT prolongation

#### **Sun, Hong-Shuo** (University of Toronto)

Synergistic Effects of Neuroprotection by TRPM7 Inhibition and Hypothermia for Hypoxic-Ischemic Brain Injury

# Thébaud, Bernard (Ottawa Hospital Research Institute)

neoPerPHuse: Neonatal Pulmonary Exosome Rescue for Pulmonary Hypertension Using Superior Endothelial progenitor cells

#### **Trigatti, Bernardo** (McMaster University)

HDL signaling in cardiomyocytes and role in protection against doxorubicin induced cardiotoxicity

#### **Ussher**, **John** (University of Alberta)

Optimizing Cardiac Energetics in Barth Syndrome

#### Verma, Subodh (St. Michael's Hospital) Co-PI: Hess, David

Regenerative Cell Exhaustion and Cardiovascular Risk in South Asians: An Integrated Approach

# Vine, Donna (University of Alberta) Co-PI: Becher, Harald

Prevention of Early Cardiovascular Disease in High-Risk Women with a Common Reproductive-Hormone Disorder

#### West, Lori (University of Alberta)

Tolerating a new heart: towards a clinically relevant transplant protocol for children through optimizing immune tolerance in neonatal mice

Whitehead, Shawn (University of Western Ontario) Co-PI: Edwards, Jodi Measuring circulating activated microglia derived extracellular vesicles post-stroke



# Wilk, Piotr (University of Western Ontario)

Exploring the relationship between high temperatures and cardiovascular disease-related morbidity and mortality: Differences across vulnerable groups and geographic areas in Canada

## Wilton, Stephen (University of Calgary) Co-PI: Rose, Robert

RASTA-X: The role of extended phenotyping in predicting response to risk factor modification and atrial fibrillation outcomes following ablation

#### Woo, Minna (University Health Network)

Investigating the Essential Role of Platelet Jak2-Mediated Inflammatory Response in Atherosclerosis

#### Young, Howard (University of Alberta)

The Dual Roles of SERCA Inhibition and Activation in Dilated Cardiomyopathy

