



## Heart & Stroke

### 2024/2025 Grant-In-Aid Grantees

Heart & Stroke is pleased to announce the 2024/25 Grant-in-Aid (GIA) recipients!

For the 2024/25 (Fall 2023) competition:

- Heart & Stroke received **187 GIA applications**.
- Following Heart & Stroke's rigorous peer and budget review processes, **70 highly rated applications** have been funded. This represents a success rate of 37%, and a total investment of \$18,476,064.
- Each funded GIA has an average duration of 2.97 years, and received an average amount of \$263,943.77. For the 2024/25 peer review season, over 150 members of the research community donated their time and expertise to the peer review process.

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**Abdel-Qadir, Husam** (Women's College Hospital) Co-PI: Amir, Eitan  
*JUdicious Surveillance for Trastuzumab Induced Cardiotoxicity in the First Year (JUSTIFY): a Randomized Controlled Trial*

**Allen, Bruce** (Université de Montréal)  
*Biased signaling by nuclear AT1Rs in cardiac cells*

**Anthony, Samantha** (Hospital for Sick Children)  
*The iPeer2Peer support mentorship program for young adult patients with heart failure: A feasibility study*

**Barber, Philip** (University of Calgary)  
*The Streamlined and Efficient Core and OcclusioN Diagnosis of Stroke (SECONDS) Study*

**Belley-Cote, Emilie** (McMaster University) Co-PI: Whitlock, Richard  
*SUNDANCE: SUBclinical valve thrombosis iN patients with surgical bioprosthetic aortic valve replacement - An imaging substudy of the DANCE trial*

**Bherer, Louis** (Montreal Heart Institute)  
*Acting before it's too late: Investigating the impact of brain pulsatility and cerebral vascular lesions on cognition and the benefits of exercise in older adults with cardiovascular risk factors.*

**Cameron, Jill** (University of Toronto)  
*A Qualitative Study of Person and Family Centered Care across the Stroke Care Continuum*

**Clemens, Kristin** (University of Western Ontario) Co-PI: Moist, Louise  
*Closing cardiovascular care gaps in women with diabetes*

**Cobey, Kelly** (University of Ottawa Heart Institute)  
*Implementing open science in the cardiovascular research community: Developing a consensus-driven action plan*

**Conway, Edward** (University of British Columbia)  
*Molecular characterisation of bridges between coagulation and metabolism*

**Crespo-Garcia, Sergio** (Université de Montréal)  
*Faulty perivascular metabolism predisposing to microvascular complications*

**Cunningham, Charles** (Sunnybrook Health Sciences Centre)  
*Imaging the Effects of Semaglutide on Heart-Brain Lactate Shuttling*

**Czubryt, Michael** (University of Manitoba)  
*Targeting Myofibroblast Metabolism in Cardiac Fibrosis*

**Dallaire, Frederic** (Université de Sherbrooke)  
*The FREQUENCY study 2: Performance of the prenatal diagnosis of congenital heart diseases*

**English, Shane** (Ottawa Hospital - Civic Campus) Co-PI: Presseau, Justin  
*Establishing an International Core Outcome Set for subarachnoid hemorrhage (SAH) – The What, When and How to Measure Outcomes in SAH Research*

**Fedida, David** (University of British Columbia)  
*Understanding gain-of-function and loss-of-function IKs potassium channel arrhythmia phenotypes*

**Forkert, Nils Daniel** (University of Calgary) Co-PI: Wilms, Matthias  
*Development of a computer-aided trial design for treatment efficacy evaluation in acute ischemic stroke*

**Friedberg, Mark** (Hospital for Sick Children)  
*Right ventricular pressure-loading causes right ventricular stiffening and failure through a mechanotransduction program of extracellular matrix remodeling and microvascular endothelial to mesenchymal*

**GENEST, Jacques** (McGill University Health Center Research Institute)  
*LOW-DOSE DOCETAXEL: POTENTIAL ANTI-ATHEROSCLEROSIS DRUG*

**Goldstein, Benjamin** (Centre for Addiction and Mental Health)  
*Arterial Stiffness in Adolescents: Does the Heart Beat the Brain?*

**Gramolini, Anthony** (University of Toronto)  
*Mitochondrial Dysfunction in Cyanotic Heart Disease: From Discovery to Mechanism to Personalized Medicine*

**Hoffman, Lisa** (Lawson Research Institute)  
*Angiopoietin-1 (Ang-1) enhances the efficacy of microdystrophin (uDys) replacement therapy for Duchenne Muscular Dystrophy (DMD)-related cardiomyopathy*

**Honjo, Osami** (Hospital for Sick Children) Co-PI: Husain, Mansoor  
*Reducing the risk of complex pediatric cardiac surgery through metabolic modulation*

**Jickling, Glen** (University of Alberta)  
*Enhanced Recanalization in Ischemic Stroke*

**Joundi, Raed** (McMaster University)  
*Understanding COgnitive decline after stroke through discoVERy of inflammatory biomarkers (UNCOVER)*

**Kassiri, Zamaneh** (University of Alberta)  
*Role of Disintegrin and Metalloproteinase-17 in the contribution of smooth muscle cells to atherosclerosis*

**Katsanos, Aristeidis** (McMaster University) Co-PI: Sharma, Mukul (Mike)  
*Covert cerebrovascular disease in patients with bileaflet aortic mechanical valves*

**Keir, Daniel** (University of Western Ontario)  
*Intensity-domain specific exercise training in coronary artery disease (DOSE-EX-CAD)*

**Kirton, Adam** (University of Calgary) Co-PI: Carlson, Helen  
*Fingerprinting individual differences in developmental and interventional neuroplasticity in pediatric stroke*

**Kizhakkedathu, Jayachandran** (University of British Columbia)  
*Novel inhibitors to destabilize immune complex formation in the treatment of heparin-induced thrombocytopenia*

**Ko, Dennis** (University of Toronto)  
*IMprove the Prevention And Cardiovascular Treatment in patients with Chronic Kidney Disease: A comprehensive evaluation of medical therapy using target trial emulation (IMPACT-CKD)*

**Lee, Douglas** (Toronto General Hospital)  
*Predicting Readmission Outcomes using Biostatistical Evaluation and Machine Learning (PROBE ML)*

**Leong-Poi, Howard** (St. Michael's Hospital)  
*Sepsis and the Heart: Novel Markers and Targets*

**Little, Jonathan** (University of British Columbia) Co-PI: Gibala, Martin  
*Exercise Snacks in Obesity: A Pilot RCT*

**MacIntosh, Bradley** (University of Toronto)  
*Imaging to CharacterisE Brain hEmoRrhaGe (ICEBERG)*

**Mak, Susanna** (University of Toronto)  
*Cardiovascular Physiology of the Active Stand Test*

**Mansfield, Avril** (University Health Network)  
*Optimal intensity of reactive balance training post-stroke*

**Marquis-Gravel, Guillaume** (Montreal Heart Institute) Co-PI: Lordkipanidzé, Marie  
*Assessing Pharmacokinetics and Pharmacodynamics of daily Enteric-coated Aspirin in patients with Stable Diabetes: APPEASED study Phase 2*

**McDermott, John** (York University)  
*Regulation and Function of Cardiac Transcription Factor Networks*

**Mequanint, Kibret** (University of Western Ontario)  
*Clinically and physiologically relevant engineered human vascular tissues as models for ectopic calcification and in-stent restenosis studies and therapeutic agent testing*

**Milot, Marie-Helene** (Université de Sherbrooke)  
*Can stimulating the tongue help improve upper limb motor function and brain plasticity in individuals at the chronic stage of a stroke: a randomized controlled trial*

**Monnier, Philippe** (Toronto Western Hospital)  
*SKI-1 inhibition prevents blood brain barrier disruption following stroke*

**Oudit, Gavin** (University of Alberta)  
*Pre-Clinical Model of COVID and Long COVID: Effects of Sex, Aging and Comorbidities*

**Ouimet, Mireille** (University of Ottawa Heart Institute)  
*Enhancing Lipophagy to Reverse Atherosclerosis*

**Patel, Vaibhav** (University of Calgary)  
*A single-cell serenade into the role of Angiotensin 1-7 in thoracic aortic aneurysm and cellular dynamics*

**Phillips, Aaron** (University of Calgary)  
*Autonomic neurorehabilitation with chronic epidural electrical stimulation to treat transient hypertension after spinal cord injury*

**Pigeyre, Marie** (McMaster University)  
*Metabolic and Inflammatory Pathways Linking Adiposity to Cognitive Decline: the Canadian Alliance of Healthy Hearts and Minds Biomarker Study*

**Poppe, Alexandre** (Université de Montréal) Co-PI: Stapf, Christian  
*EASI-TOC: Endovascular Acute Stroke Intervention-Tandem OCclusion: a trial of acute cervical internal carotid artery stenting during endovascular thrombectomy for anterior circulation stroke*

**Proctor, Spencer** (University of Alberta)  
*Efficacy of novel serum-free media clones of chP3R99 mAb against atherogenesis.*

**Radisic, Milica** (University of Toronto) Co-PI: Epelman, Slava  
*Harnessing the power of resident macrophages to promote perivascular niche formation in cardiac tissues*

**Roig, Marc** (McGill University)  
*Preventing post-stroke cognitive impairment and dementia with multimodal exercise training*

**Rungta, Ravi** (Université de Montréal)  
*The Role of Pericyte Calcium Signaling in Microinfarct Pathophysiology*

**Sood, Manish** (Ottawa Hospital Research Institute) Co-PI: Hundemer, Gregory  
*Re(de)fining CKD to reduce cardiovascular disease in young adults*

**Tang, Ada** (McMaster University) Co-PI: Quigley, Adria  
*Optimizing Recruitment to Drive Equitable Research opportunity in stroke rehabilitation trials in Canada - The ORDER Study*

**Thanassoulis, George** (McGill University Health Center Research Institute)  
Co-PI: Engert, James  
*Genomics of Aortic Stenosis - An International Collaboration*

**Thompson, Jennifer** (University of Calgary)  
*Estrogen receptor-mediated sex differences in vascular responses to new generation bisphenols*

**Thorin, Eric** (Montreal Heart Institute)  
*Vascular endothelial cell senescence drives cognitive impairment in atherosclerotic male mice only*

**Tibbits, Glen** (Simon Fraser University)  
*Role of SK ion channel variants in atrial fibrillation*

**Tijssen, Janice** (University of Western Ontario)  
*Pediatric Out-of-Hospital Cardiac Arrest Resuscitation: Evaluation of IM Epinephrine (The PRIME-1 Trial)*

**Tulloch, Heather** (Ottawa Heart Institute)  
*Survey of Life after an Acute Cardiac Event: SOLACE Study*

**Udell, Jacob** (Women's College Hospital)  
*SODium gLUcose co-transporter-2 inhibitors (SGLT2i) to PreVEnt Heart Failure (SOLVE-HF) - A pilot RCT*

**Vyas, Manav** (St. Michael's Hospital) Co-PI: Bhat, Venkat  
*Depression And Suicide After Stroke (DASAS)*

**Walsh, Jeremy** (McMaster University)  
*The effect of exogenous  $\beta$ -hydroxybutyrate on cerebral blood flow in adults with subjective cognitive decline*

**Wang, Ying** (University of British Columbia)  
*Characterizing the inflammatory pathways targeted by colchicine to better repurpose drugs for coronary artery disease*

**Welsh, Donald** (University of Western Ontario)

*Functionally Biased Vasomotor Responses in Resistance Arteries: Implications to Blood Flow Control.*

**Wen, Shi Wu** (Ottawa Hospital Research Institute) Co-PI: Lougheed, Jane

*Association of prenatal glucose levels with congenital heart disease in offspring: a large population based retrospective cohort study*

**Winship, Ian** (University of Alberta)

*Targeting progesterone signaling in leukocytes to improve outcome after stroke*

**Yokota, Toshifumi** (University of Alberta)

*Enhancing Cardiac Delivery of Antisense Oligonucleotides in Duchenne Muscular Dystrophy Using DG9 Peptide*

**Zhang, Dawei** (University of Alberta)

*Deciphering the role and underlying mechanisms of smooth muscle cell MT1-MMP/MMP14 in the progression of atherosclerosis*

**Zhang, Shetuan** (Queen's University)

*Characterization and rescue of long QT causing mutant hERG potassium channels*