



Heart & Stroke

2022/2023 Grant-In-Aid Grantees

Heart & Stroke is pleased to announce the 2022/23 Grant-in-Aid (GIA) recipients!

For the 2022/23 (Fall 2021) competition:

- Heart & Stroke received **180 GIA applications**.
- Following Heart & Stroke's rigorous peer and budget review processes, **63 highly rated applications** have been funded. This represents a success rate of **35%**, and a total investment of **\$16,073,369**.
- Each funded GIA has an average duration of **2.87 years**, and received an average amount of **\$255,132.84**.
- For the **2022/23 peer review season**, nearly **130 members** of the research community donated their time and expertise to the peer review process.

Adams, Scott (Toronto General Hospital Research Institute)

Co-PI: Thavendiranathan, Paaladinesh

Precision cardiovascular disease profiling and risk prediction in cancer survivors (PROGRESS): A prospective cohort study

Advani, Andrew (St. Michael's Hospital)

Inflammation, post-translational modification and ventricular remodelling in heart failure

Albert, Paul (University of Ottawa)

Enhancing neuroplasticity for behavioral recovery post-stroke

Allen, Bruce (Université de Montréal)

MAP Kinase-Activated Protein Kinases (MKs) 2 and 5 mediate distinct detrimental effects in heart

Auger, Nathalie (Centre hospitalier de l'université de Montréal)

Preeclampsia: Key to future maternal health

Barber, Philip (University of Calgary)

The PREVENT VCI Study

Bello, Aminu (University of Alberta)

Cardiac Care and Outcomes in Patients with Advanced Kidney Disease.

Bolz, Steffen-Sebastian (University of Toronto)

The Mechanistic Basis and Significance of Circadian Rhythms in Cerebrovascular Reactivity

Bouabdallaoui, Nadia (Université de Montréal)

Effects of COLchicine on inflammation, myocardial damage and diastolic dysfunction in heart failure with Preserved Ejection Fraction – The COLpEF phase 2 trial

Brown, Craig (University of Victoria)

Elucidating the neuronal basis of diaschisis in stroke recovery: applying new tools to answer an old question

Chen, S.R. Wayne (University of Calgary)

Role and Mechanism of PKA Phosphorylation of Cardiac Ryanodine Receptor

Cummins, Carolyn (University of Toronto)

The LXR/EPC secretome: a new source of anti-atherogenic proteins

Eves, Neil (University of British Columbia)

The Effect of Lower-body Negative Pressure on Exercise Tolerance and Mechanisms of Dyspnea in Heart Failure with Preserved Ejection Fraction

Field, Thalia (University of British Columbia)

SEARCH: Stroke, other vAscular bRain injuries and Cognitive decline in adult congenital Heart disease

Friedberg, Mark (Hospital for Sick Children)

Regionally and chemically imbalanced right ventricular mechanotransduction in right ventricular pressure loading leads to RV fibrosis and dysfunction

Ganesh, Aravind (University of Calgary)

Co-PI: Almekhlafi, Mohammed

EVOLVE-Cog: A prospective cohort study of the cognitive and neuropsychiatric effects of iatrogenic brain infarcts and their prevention by acetylsalicylic acid

Girouard, Helene (Université de Montréal)

Does arterial stiffness exacerbate cerebrovascular and memory deficits in Alzheimer's disease?

Graham, Simon (Sunnybrook Health Sciences Centre)

Functional MRI of Neuropsychological Tests for Assessing Cognitive Impairment

Hamilton, Robert (Hospital for Sick Children)

Determining the fetal conduction target proteins of autoantibodies in congenital heart block: developing a sensitive and specific biomarker of pregnancies at risk

Hébert, Terence (McGill University)

Patient-specific disease modelling in dilated cardiomyopathy

Heit, Bryan (University of Western Ontario)

GATA2 Regulates Macrophage Proliferation and Differentiation in Atherosclerosis

Howlett, Susan (Dalhousie University)

Frailty and cardiac aging in male and female mice: mechanisms, treatments, and links to heart failure

Johri, Amer (Queen's University)
Female Risk factors for post-Infarction Depression and Anxiety (FRIDA Study)

Kassiri, Zamaneh (University of Alberta)
Disintegrin and Metalloproteinase-17, a key regulator of Fibrosis and Inflammation in Adverse Myocardial Remodeling

Koschinsky, Marlys (University of Western Ontario)
Co-PI: Boffa, Michael
Lipoprotein(a) and calcific aortic valve disease: a transgenic mouse model to study the molecular mechanisms of lipoprotein(a) action and the impact of lipoprotein(a) lowering

Krepinsky, Joan (McMaster University)
Co-PI: Dickhout, Jeffrey
Defining how follistatin improves vascular function and hypertension

Kubes, Paul (University of Calgary)
Visualizing neutrophil recruitment and function in the injured heart

Lauck, Sandra (University of British Columbia)
Co-PI: Lewis, Krystina
Making a High Quality Decision for the Treatment of Aortic Stenosis: Implementation of a Patient Decision Aid (AS-PDA)

Lewis, Gary (University of Toronto)
Mechanism of hypercholesterolemia induced by a ketogenic diet

Li, Ren-Ke (University Health Network)
Ageing Negatively Impacts EV Therapy For Improving Cardiac Repair Following Myocardial Ischemia-Reperfusion

Liang, Wenbin (University of Ottawa Heart Institute)
Regulation of T-type calcium channels by Wnt signaling and its role in sinoatrial node dysfunction

Lohman, Alexander (University of Calgary)
Regulating Pannexin-1 mediated neuroinflammation in ischemia/reperfusion to improve stroke recovery

Ma, David (University of Guelph)
Co-PI: Haines, Jess
Determining the association between sodium intake and cardiovascular disease risk factors among preschool-aged children

Maass, Philipp (Hospital for Sick Children)
Decoding the impact of a novel RNA gene on hypertension

McGavock, Jonathan (University of Manitoba)
Co-PI: Sellers, Elizabeth

Physical activity and cardiovascular health in adolescents with type 2 diabetes: A pilot trial

McIntyre, Christopher (Lawson Health Research Institute)

Identifying Therapeutic Hemodialysis Targets Through Cerebrovascular Reactivity

Michelakis, Evangelos (University of Alberta)

A central role of cardiac Fibroblasts in right ventricular failure in Pulmonary Hypertension: the foundation of a therapeutic and biomarker discovery program

Morshead, Cindi (University of Toronto)

Defining the cellular basis for Metformin mediated functional recovery following neonatal stroke

Nattel, Stanley (Montreal Heart Institute)

Role of the Calcitonin Receptor System in Cardiac Physiology and Remodeling

Ni, Heyu (St. Michael's Hospital)

Apolipoprotein A-IV and platelet function: Novel links with thrombosis, inflammation, and atherosclerosis

Oudit, Gavin (University of Alberta)

Utility of Cardiac Magnetic Resonance Imaging and Plasma Biomarkers in Patients with Muscular Dystrophy: A Prospective Cohort Study

Ouzounian, Maral (Toronto General Hospital)

Co-PI: Appoo, Jehangir

Treatment in Thoracic Aortic Aneurysm: Hemiarch vs Extended arch in Aortic Dissection - a Systematic Analysis by Randomized Trial (TITAN:HEADSTART)

Pilote, Louise (McGill University Health Center Research Institute)

Co-PI: Rajah, Maria Natasha

Long-Term Cognitive Impairment among Women with Hypertension during Pregnancy

Quinn, T Alexander (Dalhousie University)

Mechanisms and Importance of Ventricular Mechano-arrhythmogenesis in Hypertension

Raj, Satish (University of Calgary)

Real-World Evaluation of Dietary Salt and Compression Garments in Postural Orthostatic Tachycardia Syndrome (POTS)

Renoux, Christel (McGill University)

Nouveaux anticoagulants oraux et prévention de la démence chez les patients atteints de fibrillation auriculaire: étude de cohorte en population générale

Robertson, George (Dalhousie University)

Nanoparticle drug delivery for ischemic stroke

Rose, Robert (University of Calgary)

Impacts of frailty on aging-dependent sinoatrial node dysfunction and atrial fibrillation

Schmölzer, Georg (University of Alberta)

Examining vasopressors during Neonatal Resuscitation

Schneider, Prism (University of Calgary)

Oral Anticoagulation in Hip Fracture Patients: A Multi-centre Pilot Study to Evaluate Feasibility of Implementing a Timely Hip Fracture Care Pathway

Schwarz, Ute (University of Western Ontario)

Role of OATP Uptake Transporters in Statin-Induced Impairment of Islet Cell Function

Seubert, John (University of Alberta)

Protecting the Aged Heart from Ischemia- Reperfusion Injury by Limiting Mitochondrial Damage and Regulating the Innate Immune Response with Novel Epoxy Lipids

Sheffield, William (McMaster University)

In vivo assessment of engineered factor XIa inhibitors

Singh, Hardeep (University of Toronto)

Co-PI: Nelson, Michelle

Exploring the poststroke experiences and needs of South Asian, Asian and Black ethnic groups: Breaking down the “one-size-fits-all” approach to poststroke services

Singh, Krishna (University of Western Ontario)

Novel Mechanisms of Endothelial Dysfunction in Diabetes

Sweeney, Gary (York University)

Investigating the functional significance of autophagy in adiponectins cardioprotective actions and translational studies with an adiponectin receptor agonist

Thanassoulis, George (McGill University Health Center Research Institute)

Co-PI: Engert, James

Addressing knowledge gaps in the use of lipoprotein(a) screening in cardiovascular prevention

Tomczak, Corey (University of Saskatchewan)

Co-PI: Olver, T. Dylan

Targeting Blood Vessel Health with Handgrip Exercise in Adolescents and Emerging Adults with Congenital Heart Disease: A Randomized Control Trial

Vuksan, Vladimir (St. Michael's Hospital)

Administration of fruit and vegetable concentrates with blood pressure lowering properties and vascular benefits as a dietary approach to hypertension management

Vyas, Manav (St. Michael's Hospital)

Co-PI: Kapral, Moira

(I-SPI) Improving Stroke Prevention in Immigrants

Wellington, Cheryl (University of British Columbia)

Using bioengineered cerebral vessels to understand the contributions of brain and peripheral apolipoprotein E on vascular contributions to Alzheimer's Disease

Zhang, Dawei (University of Alberta)

Understanding the role of prosaposin in lipid metabolism and the progression of atherosclerosis

Zheng, Xi-Long (University of Calgary)

Characterize the Function of RNase MCPIP1 in Vascular Smooth Muscle

Zheng, Xiufen (University of Western Ontario)

Identification of a new master regulator for controlling ischemia-reperfusion injury in cardiac surgery: circCRIM1