



2022/23

Grant-in-Aid Submission Guidelines

(Fall 2021 Competition)

30 June 2021

TABLE OF CONTENTS

A. GENERAL INFORMATION	3
1) Grant-in-Aid	3
2) Application Submission Deadline	3
3) Incomplete/Unacceptable Applications.....	3
4) Competition Results.....	3
5) Non-Employee Status	3
6) Public Information	3
7) Ethical Requirements.....	4
8) Sex and Gender-Based Analysis (SGBA)	4
9) Equity, Diversity and Inclusion (EDI)	4
10) Indirect Costs.....	5
11) Open Science and Open Access to Research Outputs	6
12) Publications	6
13) Four Themes of Health Research	6
14) Lay Reviewers	7
15) Financial Gain.....	7
16) Multiple Submissions/ Funded GIA Applications	7
17) Applications for Renewal.....	7
18) Status of Publications	7
B. RESEARCH INTEGRITY POLICY.....	8
C. SPECIFIC PROGRAM INFORMATION.....	9
1) Description.....	9
2) Peer Review	9
3) Eligibility Criteria	10
4) Application	10
5) Clinical Trials	15
6) Partnered Funding	15
7) Top-up Funding or Duplication of Funding	16
8) Multi-Centre/Site Application.....	16
9) Contact Information.....	16

A. GENERAL INFORMATION

1) Grant-in-Aid

The Heart & Stroke Grant-in-Aid (GIA) program provides operating funds to support important, pertinent, novel research in the areas of heart disease and/or stroke. GIA funding promotes research discovery, exploration and innovation across all health research themes. Knowledge gained from scientific findings contributes to the cardiovascular and cerebrovascular health of Canadians through prevention, treatment and recovery.

A limited number of applications that fall below the GIA funding level may be considered for funding at a reduced budget for a one-year period. Such applicants will be contacted in Spring 2022 by Heart & Stroke and should they accept the reduced budget and term, they will be asked to provide an abbreviated research plan and budget.

2) Application Submission Deadline

Applications for Grant-in-Aid must be submitted **by 16:00 (EDT) 26 August 2021** using the Heart & Stroke's electronic grant management system (CIRCULink). CIRCULink will not accept submissions after this deadline. **Any applications attempted or submitted after the deadline will NOT be accepted. There will be no appeal process to late submissions. It is the applicant's responsibility** to ensure that a completed application is submitted online via CIRCULink prior to the deadline.

3) Incomplete/Unacceptable Applications

All applicants are strongly cautioned to carefully *read* and *follow* the instructions and requirements outlined in this guideline document. All submissions are considered final, no alterations or changes will be accepted.

In order to maintain the principle of fairness to all applicants, regulations *must* be adhered to in the preparation of the Grant-in-Aid application. *Any* infraction of the rules will lead to the truncation or immediate rejection (**without appeal**) of the application.

Any incomplete applications will not be admissible to the competition.

4) Competition Results

Early notification (not likely to be funded/may or may not be funded/most likely to be funded) may be sent to applicants **in early 2022**. The release of early notifications is dependent on the timing of peer review. Applicants will be advised of any changes to program milestones via email.

Official/final notifications will be sent to applicants by **the end of March 2022** or an update on notifications will be provided prior to that date.

5) Non-Employee Status

The granting of an award is deemed to establish neither an employer-employee relationship nor a partnership between the grantor and the grantee.

6) Public Information

Successful applicants need to be aware that the title of their research project and the lay summary will be placed into the public domain or included in Heart & Stroke publications without notification. Applicants are cautioned not to disclose information that could endanger a proprietary position in these sections.

Successful applicants may be asked to help us communicate the importance of research to Heart & Stroke donors and the general public. Raising funds to support research is difficult and, more than ever, we need to let our donors and the public know that their donations are being used to support world class research. Applicants are well-positioned to explain the role of research in increasing heart health and reducing the burden of heart disease and stroke and may be asked to serve as a spokesperson or to work with us to profile their research.

7) Ethical Requirements

Heart & Stroke requires a copy of all ethics/safety review board approval forms. In the CIRCUlink application, please indicate the status of such forms (e.g., “Included”, “Form to be Sent”, “Not applicable”) as they apply to the research proposal. If the application is accepted for funding, funds will be encumbered pending receipt of all required forms. Further, in applying applicant and institutional signatures to this application, applicants are confirming to Heart & Stroke that the proposed research will not be undertaken until it has been endorsed as ethical and safe – initially and throughout the term of the project, as needed – by the appropriate review body(ies).

Heart & Stroke reserves the right to periodically request additional approval forms during the term of the project. Forms included with the application must be valid at least 30 days beyond the start date of the award.

Applicants must provide acceptable documentation for human and/or animal ethical approval, and biohazard and safety approval as outlined in the Heart & Stroke guidelines.

Applicants must ensure all experiments comply with the following guidelines and host institution research policies, as applicable:

- Tri-Council Policy Statement: *Ethical Conduct for Research Involving Humans*¹.
- Good Clinical Practice (GCP).
- Good Laboratory Practice (GLP).
- In the case of laboratory animal experimentation, the guiding principles and standards enunciated by the Canadian Council on Animal Care².
- Guidelines and standards for biological and chemical hazards as outlined in the Public Health Agency/Canadian Food Inspection Agency’s *Canadian Biosafety Standards and Guidelines*³.
- Any research involving human pluripotent stem cells must adhere to the CIHR *Guidelines for Human Pluripotent Stem Cell Research*⁴. The institution must notify Heart & Stroke as to the results of the review by the CIHR’s Stem Cell Oversight Committee.

8) Sex and Gender-Based Analysis (SGBA)

Heart & Stroke has committed to advancing sex and gender-based analysis (SGBA) and improving health for all. Applicants are required to integrate SGBA in their research design. Any application that does not incorporate SGBA must provide a rationale why it would not be relevant to the project. All applicants are strongly encouraged to complete CIHR’s Institute of Gender and Health training modules:

<http://www.cihr-irsc.gc.ca/e/49347.html>.

9) Equity, Diversity and Inclusion (EDI)

Heart & Stroke has committed to advancing equity, diversity and inclusion (EDI) and improving health for all. This commitment applies across our organization including to our research investment and our desire

¹ See <http://www.pre.ethics.gc.ca/eng/policy-politique/initiatives/tcps2-eptc2/Default> for details.

² See <http://www.ccac.ca/en/standards/guidelines>

³ See <http://canadianbiosafetystandards.collaboration.gc.ca/index-eng.php> for details.

⁴ See <http://www.cihr-irsc.gc.ca/e/15255.html> for details.

to strengthen the quality and impact of the research we fund and ultimately improve health outcomes for the wide and diverse population in Canada.

Equity⁵ is defined as the removal of systemic barriers, enabling all individuals to have equal opportunity to access and benefit from the research, with a focus on those bearing a disproportionate burden of disease which includes but is not limited to: women, indigenous peoples, persons with disabilities, members of visible minorities/racialized groups, and members of LGBTQ2+ communities.

Diversity is defined as differences in race, colour, place of origin, religion, immigrant and newcomer status, ethnic origin, ability, sex, sexual orientation, gender identity, gender expression and age.

Inclusion is defined as the practice ensuring that all individuals are valued and respected for their contributions and are equally supported.

To create and sustain change in heart and stroke research, principles of equity, diversity, and inclusion need to be integrated across research design, methods, analysis and reporting, as well as participation in the research system, including on research teams.

Applicants are encouraged to integrate EDI considerations in their research design and composition of their teams, as appropriate. Applicants should consider a diversity of factors (such as race, colour, place of origin, religion, immigrant and newcomer status, ethnic origin, ability, sex, sexual orientation, gender identity, gender expression and age⁶), as appropriate, in their GIA application.

Applicants are asked to describe how sound EDI considerations have been integrated in their proposal or to explain why EDI considerations would not be relevant to the project. In the Fall 2021 GIA competition, EDI factors will not be included in the evaluation criteria. Heart & Stroke anticipates incorporating EDI considerations into grant review in subsequent competitions.

All applicants are strongly encouraged to complete CIHR's [Unconscious Bias training](#) (video module). Equity, diversity and inclusion in the research ecosystem and the Tri-Agency Statement on EDI can be accessed through the [Equity, Diversity and Inclusion in the Research System - CIHR \(cihr-irsc.gc.ca\)](#) along with a resource section on how to integrate EDI in research [EDI Resources - CIHR \(cihr-irsc.gc.ca\)](#). Gendered Innovations in science, health & medicine, engineering and environment at Stanford provides tools and resources to support learning about sex, gender and intersectionality: [Gendered Innovations | Stanford University](#)

10) Indirect Costs

Heart & Stroke supports only the direct costs of research. No funding is to be used for indirect costs of research. The definition of indirect costs of research for the purposes of this policy is costs which cannot be directly associated with a particular research program or operating grant including; costs associated with the general operation and maintenance of facilities (from laboratories to libraries); the management of the research process (from grant management to commercialization); and regulation and safety compliance (including human ethics, animal care and environmental assessment); and generic institutional/departmental taxes/tithes related to services.

⁵ EDI definitions source: *Best practices in equality, diversity and inclusion in research*. Canadian Research Coordinating Committee, New Frontiers in Research Fund. [Best Practices in Equity, Diversity and Inclusion in Research \(sshr-crrsh.gc.ca\)](#)

⁶ Government of Canada, *Best Practices in Equity, Diversity and Inclusion*, <https://www.sshrc-crsh.gc.ca/funding-financement/nfrf-fnfr/edi-eng.aspx>

11) Open Science and Open Access to Research Outputs

Open Science⁷ is the practice of making scientific inputs, outputs and processes freely available to all with minimal restrictions. Scientific research outputs include (i) peer-reviewed science articles and publications, (ii) scientific and research data and (iii) public contribution to and dialogue about science. Open Science is enabled by people, technology, and infrastructure. It is practiced in full respect of privacy, security, ethical considerations, and appropriate intellectual property protection.

Sharing data, information, tools, resources, and results and eliminating barriers to collaboration will accelerate the creation and exchange of knowledge to improve health.

Heart & Stroke requires that all researchers supported in whole or in part through the Heart & Stroke make their research inputs, processes, and outputs publicly available as soon as possible but no later than twelve months after the final publication or availability of results. In this policy, the Heart & Stroke defines research outputs as peer-reviewed journal publications, positive and negative research data, and the results of clinical trials that will not be published in peer-reviewed journals. Compliance with [the Open Access to Research Outputs policy](#) is a condition of acceptance of all the Heart & Stroke research funding.

Heart & Stroke encourages researchers funded through the GIA competition to use the open science principles (FAIR: Findable, Accessible, Interoperable, and Reusable) as a guide to sharing outputs and eliminating barriers to collaboration. At this time, proposed Open Science efforts will not be included in the evaluation criteria. Heart & Stroke anticipates incorporating Open Science into grant review in subsequent competitions.

To learn more about open science and the federal government's Open Science roadmap see https://www.ic.gc.ca/eic/site/063.nsf/eng/h_97992.html.

12) Publications

A Principal Investigator must acknowledge the support of Heart & Stroke in all scientific publications and presentations related to their award with the following wording: *"This work was supported by a grant-in-aid from the Heart and Stroke Foundation of Canada."* In addition, a copy of publications and presentations must be submitted with each progress and final technical report. To facilitate the implementation of Heart & Stroke's program for knowledge transfer and exchange and to demonstrate accountability for use of research funding Heart & Stroke must be notified in advance of the publication date of any major publications and/or press releases arising from research funded by Heart & Stroke by email at: research@heartandstroke.ca.

13) Four Themes of Health Research

GIA applicants must estimate what proportion of the proposed research and proposed project budget falls under the four health research themes.

The four (4) themes of health research as defined by the Canadian Institutes of Health Research are:

Basic Biomedical (I)

Research with the goal of understanding normal and abnormal human function, at the molecular, cellular, organ system and whole-body levels, including the development of tools and techniques to be applied for this purpose; developing new therapies or devices which improve health or the quality of life of individuals, up to the point where they are tested on human subjects. Studies on human subjects that do not have a diagnostic or therapeutic orientation.

⁷ Government of Canada, *Roadmap for Open Science*, www.ic.gc.ca/eic/site/063.nsf/eng/h_97992.html#8

Clinical (II)

Research with the goal of improving the diagnosis and treatment (including rehabilitation and palliation) of disease and injury; improving the health and quality of life of individuals as they pass through normal life stages. Research on, or for the treatment of, patients.

Health Services/Systems (III)

Research with the goal of improving the efficiency and effectiveness of health professionals and the health care system, through changes to practice and policy. Health services research is a multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviours affect access to health care, the quality and cost of health care, and ultimately Canadians' health and well-being.

Social, cultural, environmental and population health (IV)

Research with the goal of improving the health of the Canadian population, or of defined sub-populations, through a better understanding of the ways in which social, cultural, environmental, occupational, and economic factors determine health status.

14) Lay Reviewers

Heart & Stroke incorporates lay reviewers on its Scientific Review Committee (SRC) panels to increase accountability and transparency of the Heart & Stroke review process and to ensure that the research is aligned with its goals and mission. Heart & Stroke places a high priority on ensuring appropriate lay summaries are submitted as part of each application. If the application is accepted for funding and the lay summary is identified as unsatisfactory, funds will be encumbered pending receipt of a satisfactory lay summary.

15) Financial Gain

Heart & Stroke will not fund a GIA application which results in any form of direct financial profit to investigators or individuals related to that funded research project (e.g., related to commercial interests, or the development of commercial products as an output of the research).

16) Multiple Submissions/ Funded GIA Applications

Applicants may submit only one (1) grant application (new or renewal) to the 2022/23 GIA competition as either Principal or Co-Principal Investigator.

Applicants may hold up to two (2) Heart & Stroke funded GIAs as Principal and/or Co-Principal Investigator at any time. If an applicant holds more than one (1) ongoing GIA funding as Principal and/or Co-Principal Investigator continuing into the 2022/23 funding year (01 July 2022 to 30 June 2023), no new application can be submitted.

17) Applications for Renewal

A grantee wishing to renew an active grant typically makes an application for renewal during the final year of the active grant. **If a grantee applies for a renewal earlier than this, the grantee immediately forfeits all remaining years of the active grant, except the current year.**

18) Status of Publications

Manuscripts may not be attached unless they have been submitted and accepted to a pre-print server or submitted or accepted for publication in a peer-reviewed journal. Any manuscript included with an application must be accompanied by documentation confirming its status. **Only updates to the six (6) representative publications attached as part of the proposal** and progress sections of the application will be accepted. Heart & Stroke will not accept letters indicating confirmation of acceptance for publication of a paper after December 1, 2021.

B. RESEARCH INTEGRITY POLICY

The primary objective of Heart & Stroke's Research Integrity Policy is to protect and defend the integrity of the research process and to deal with allegations of scientific misconduct in a timely and transparent fashion. Responsibilities of researchers, institutions and the Heart & Stroke with respect to research integrity are outlined in the [Heart & Stroke: Responsible Conduct of Research](#).

As a condition of funding, all Heart & Stroke grant and award recipients agree to comply with the Principles and Responsibilities set out in that policy, and the research misconduct provisions below.

Heart & Stroke defines research misconduct to include actions that are inconsistent with "integrity" as defined by the Framework, and to include such actions as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research, or in reporting research results.⁸

Heart & Stroke will deal with allegations of scientific misconduct in the following manner:

- Any allegation of scientific misconduct will be initially reviewed by Heart & Stroke to determine whether an investigation is warranted. If it is felt that an investigation is required, Heart & Stroke may request that this be conducted by the host institution of the individual considered to have performed the alleged misconduct. In allegations specifically related to the peer review process, the investigation may be conducted jointly by the institution and Heart & Stroke.
- Heart & Stroke will not act on verbal allegations of misconduct. All allegations must be submitted in writing. Although the confidentiality of persons who submit an allegation of scientific misconduct will be protected as much as possible, it must be recognized that due process will often result in the identity of this person being released to the investigating institution.
- The institution will be required to submit a written report upon conclusion of the investigation. This report will summarize the findings of the investigation and any future actions that will be undertaken by the institute as a result of the findings.
- In cases where misconduct is concluded to have occurred, the Heart & Stroke may apply sanctions against the individual(s) implicated. These sanctions will range from a reprimand letter to a ban from applying for or holding Heart & Stroke funds for a set period of time.

⁸ Wording adopted from the US Department of Health and Human Services, Public Health Service Policies on Research Misconduct, Final Rule. May 17, 2005. Definitions are available from. <https://ori.hhs.gov/definition-misconduct>

C. SPECIFIC PROGRAM INFORMATION

1) Description

Heart & Stroke offers support for projects in cardiovascular or cerebrovascular research. This support may be provided for a maximum of three years. **All awards become tenable July 1 following announcement of the competition results.**

GIA funds may only be used to support research conducted in Canada.

2) Peer Review

Heart & Stroke's peer review process engages national and international researchers and includes over 180 members of the Scientific Review Committee (SRC). The SRC comprises up to 13 separate panels that ensure in-depth knowledge and expertise in all areas of heart disease and stroke. All review panels may meet in person or virtually at the discretion of the SRC and Heart & Stroke.

Applications to the GIA program which are eligible for funding will be ranked by fixed percentile within each research committee by the SRC. These rankings will drive which applications are put forth to the Budget Review Committee (BRC); a sub-panel of the SRC which works alongside other SRC sub-panels in appraising GIA applications. The BRC consists of a Chair and Deputy Chair, and members approved by the SRC Executive Chair and Vice-Chair. Budget peer reviewers are selected for their expertise related to the mandate of the review committee and their experience in reviewing and evaluating research funding applications. As with membership on all SRC committees, the BRC balances geographical representation and ensures that each committee has the capacity to review applications submitted in English or French.

A pre-relevancy check will be conducted by the SRC Executive to ensure that applications submitted fit squarely into the Heart & Stroke mission, as presented in the GIA program mandate and SRC sub-panels (see below). **If an application is deemed not directly relevant, Heart & Stroke will exclude it from further review, without appeal.** Therefore, it is important that all applicants clearly justify the direct relevance of their proposed research in the lay summary and application.

SRC Sub-Panels may include:

- I. **Clinical cardiovascular and cerebrovascular research:** Mechanistic studies and clinical trials/health services research. Areas and expertise include: Mechanistic studies focusing on human studies, clinical trials (therapeutic and surgical), health services, and health care delivery.
- II. **Integrative studies: Genetic manipulations/imaging/bioengineering.** Areas and expertise include: Integrative studies in animal models, diagnostic and imaging technology development in animals and humans, and novel therapeutic strategy and device development in animals, including regenerative approaches.
- III. **Basic science stroke/neurophysiology/neuroregulation.** Areas and expertise include: Stroke, neurophysiology and neural cell biology, and neuroregulation.
- IV. **Cellular biochemistry, pharmacology, and electrophysiology.** Areas and expertise include: Cardiovascular physiology and pathophysiology, cell biology, cell signalling, cellular biochemistry, pharmacology, and electrophysiology. Specifically, the three sub-panels are:
 - a. Molecular, biochemical and cellular physiological approaches to cardiovascular health and disease, vascular disorders.
 - b. Cardiac arrhythmias, cardiac mechanics, electrophysiological approaches to cardiovascular health and disease, ischemia related disorders.
 - c. Cardiovascular complications associated with obesity/diabetes, metabolism, and cardiac development/remodelling.
- V. **Molecular basis of cardiac and vascular function.** Areas and expertise include: Inflammation, immunology, transplantation, and vascular pathology.
- VI. **Thrombosis/lipid and lipoproteins/fundamental nutrition research.** Areas and expertise include: Coagulation, bleeding disorders, thromboembolism, lipid and lipoprotein metabolism, atherogenesis, atheroma, and its degenerative consequences, and nutritional contribution to atherogenesis, thrombophilia or bleeding disorders.

VII.

- a. **Health services and Public Health.** Areas and expertise include research that examines the influence, delivery and management of health care services, evaluates and assesses outcomes of health care services, and health services policy and regulation. Research examining influences, predictors, trends, socio-cultural influences on public health and population level health, including health services provision and targets, health equity, access to services and policies affecting public health. Population health interventions.
- b. **Health behaviour; health psychology.** Areas and expertise include research that examines influences and precursors, including social and environmental influences, on behaviours and on the relationships of behaviours to health outcomes including social, environmental and health psychological factors predicting health status, health behaviours, health outcomes, and the relationships among them. Interventions targeted at specific individuals or sub-populations based on behavioural or psychological manipulations.

The final decision in regard to the sub panels and the placement of the applications within in a sub panel rests with the SRC.

3) Eligibility Criteria

Equity, diversity and inclusion (EDI) in research environments enhances excellence, innovation and creativity. Heart & Stroke is committed to excellence through equity and encourages applicants from diverse and equity deserving groups to apply to our funding opportunities. Heart & Stroke encourages Principal Investigators to integrate EDI considerations in selection of members of the research team.

a) General

Principal Investigators (and Co-PIs) must have a full-time academic or faculty appointment (i.e., at minimum, at the Assistant or Clinical Assistant Professor level) in Canada at the time the application is submitted. The date of first faculty appointment will be based on the date listed in the Common CV (i.e., under Employment). Please ensure your Common CV is updated and correctly identifies a valid appointment. Applicants holding lecturer/clinical scholar of similar university appointments that are of lower tier than Assistant Professor appointments are not eligible to apply as principal applicants.

For any application with a PI and co-PI, should the PI be deemed ineligible the entire application will be withdrawn from the competition. There will be no appeal process for applications deemed ineligible.

Applicants holding adjunct appointments at an academic institution must submit a letter from their dean/chair/division director to clarify that through their specific appointment they are accorded protected time for research. They are required to quantify the amount of protected time available, their access to research infrastructure and their access to other resources necessary to conduct the proposed research study.

4) Application

Applications will be completed online using Heart & Stroke's online system, CIRCULink. Heart & Stroke will accept a scanned copy of the original signature uploaded into CIRCULink; electronic signatures will also be accepted. Applicants need not send an original copy of the signature page to Heart & Stroke. (Note: The expectation is that an electronic signature will hold the same weight as an original (wet) signature).

Due to conflict of interest, letters of support from Heart & Stroke are not permitted as part of any application to any Heart & Stroke research competitions.

a. Research Proposal - Guidelines

Applicants are required to attach a detailed research proposal. The research proposal must include the following:

- Hypothesis to be tested;
- Knowledge to date;
- Methods to be used;
- Anticipated results and conclusions;
- Possible problems; and
- Pertinent references.

Submissions must be prepared according to the following guidelines:

Formatting

- Text must be single-spaced, 12-point Times New Roman or 11-point Arial (including labels and descriptions, as well as, items such as figures, tables, charts, photographs).
- Margin of 2 cm (3/4 inch) around the entire page.
- Header:
 - “Research Proposal” (left corner)
 - Applicant Name (right corner)
- Footer:
 - Number pages consecutively
 - Page numbers must be centered

Organization

- The Research Proposal should be predominantly text and is limited to ten (10) pages. **The number of pages should reflect the size and scope of the proposed research. Pages beyond the ten (10) page limit will NOT be evaluated by the reviewers.**
- Within the allotted 10-page limitation applicants may submit figures, charts, tables and photographs. These portions of the submission count towards the ten (10) page limit.
- References should be placed at the end of the research proposal and will not count toward the ten (10) page limit.
- Additional supporting documentation such as questionnaires, more detailed explanations of RCT methods, and consent forms may be attached as a separate document (there is no page restriction, and these will not count towards the 10-page limit).

Applications failing to adhere to the guidelines WILL be deemed unacceptable and WILL be removed from the competition. There will be no appeal of this removal.

b. Scientific, Methodological or Budgetary Overlap: Current Funding and Pending or Contemplated Grant Submissions

For each currently funded grant (including CIHR Foundation and Project schemes), grant under submission or in preparation, attach the necessary information to the GIA application that describes whether/how there is any scientific, methodological, or budgetary overlap with the current application (i.e., registration copy from CIHR for Project grant applications). A percentage for the degree of overlap must be provided on the application, where requested, under each of the three (3) categories.

c. Sex (biological) and Gender (socio-cultural) considerations:

Applicants are required to integrate sex and gender-based analysis (SGBA) in their research design and analysis. Any application that does not incorporate SGBA considerations must provide a rationale why it would not be relevant to the project. All applicants are strongly encouraged to complete CIHR's Institute of Gender and Health training modules: <http://www.cihr-irsc.gc.ca/e/49347.html>

d. Equity, diversity and inclusion considerations:

Applicants are encouraged to integrate EDI considerations in their research design and composition of their teams, as appropriate. Applicants are asked to describe how sound EDI considerations have been integrated in your proposal and to explain why EDI considerations would not be relevant to the project. At this time, EDI factors will not be included in the evaluation criteria. Applicants are encouraged to complete the [CIHR unconscious bias training](#).

e. Budget

The Budget Review Committee (BRC) is Heart & Stroke's mechanism for ensuring informed budget review of all potentially funded Grant-in-Aid (GIA) projects. The BRC provides support and advice on budgetary items during the budget review process and for the duration of Heart & Stroke funding (as necessary).

Budget Request: Heart & Stroke will not approve budgets exceeding \$100K/year (for a maximum duration of 3 years).

Budget Justification

Rigorous justification of proposed spending needs to be provided and will be rigorously reviewed by Heart & Stroke.

Rigorous justification of the budget requires an explanation and rationalization for each budget item. Sufficient information must be included such that it will allow reviewers to assess whether the resources requested are appropriate. Failure to provide detailed information and appropriate justification **may result in budget cuts that could adversely affect the final budget awarded for the project**. Please provide rationale for the quantities, attributes and requirements for the particular people (e.g., name, role) and items requested.

i. **Salaries and Benefits:**

Heart & Stroke will only provide benefits up to a maximum of 30%. **Heart & Stroke will not cover any salary increases above a 2% annual increase.**

Provide names (if known), categories of employment and proposed salaries (including non-discretionary benefits) of all personnel identified in the budget. Attach a copy of the institutional guidelines relating to requested benefit levels. Briefly describe the responsibilities of each position for which support is requested and attach a brief CV as an appendix for those positions for which an individual has been identified.

Salaries for unnamed research assistants, technicians and research associates should also conform to those of the institution in which the individual is carrying out the research, subject to the approval of Heart & Stroke.

If a PI, co-PI or co-applicant possesses the necessary expertise, no request for salary or benefits can be made for the same/similar expertise without proper justification for such a request.

ii. **Summer Students/Graduate Students/Fellows:**

Heart & Stroke encourages junior trainees (particularly doctoral students) to be included in the proposed research with a defined and clearly written role (within the project submitted), as well as properly justified in the budget notes should there be financial implication(s).

Stipend levels cannot exceed the maximum stipend levels from the chart below. Please ensure that all students identified within the application have their specific role spelled out, including identifying how their role contributes to the advancement of the current research proposal and is justified in the budget justification section of the application.

Heart & Stroke does not provide additional support for benefits towards summer students, undergraduate students, graduate students, and/or post-doctoral fellows.

Position	Max Annual rate (inclusive of benefits)
Graduate/PhD Student	\$24,000
Post-Doc Fellow, PhD	\$45,000
Post-Doc Fellow, MD	\$55,000
Summer Studentships	\$5,000 (summer)

iii. Research Equipment (including maintenance and facility):

Research equipment is defined as any item (or interrelated collection of items comprising a system) that meets all three (3) of these conditions:

- Non-expendable tangible property;
- Useful life of more than one (1) year; and
- A cost of \$2,000 or more.

For example: A laptop computer that costs less than \$2,000 would be considered as materials or supplies even though it is a non-expendable tangible item with a useful life of more than one year.

A cost quotation must be provided for equipment or service contracts greater than \$5,000. Two (2) competitive quotes as well as letters from an appropriate institutional official documenting the availability and status of similar equipment are required for items costing more than \$15,000.

Provide a breakdown and justification of the items requested. Give details of models, manufacturers, prices and applicable taxes. In addition, for maintenance and/or equipment items listed, indicate:

- The availability and status of similar equipment.
- The anticipated extent of utilization.
- The reasons for choice of specific type, model or service contract, in relation to alternatives.

For equipment or service contracts costing more than \$5,000, attach at least one (1) quotation for cost. For items costing more than \$15,000, attach a letter from the Department Head(s) and/or Research Institute Director(s), that document availability and other details, plus at least two (2) competitive quotes.

Non-adherence to submission of the appropriate cost quotations will negatively affect the final budget.

Maintenance and facility refers to costs associated with purchasing new equipment. Examples would include small renovations such as installation of shelving to facilitate new equipment, plugs required for new computers, and installation contracts.

iv. Experimental Animals:

Include species to be used and sample size justification along with calculations, if applicable.

Provide a breakdown for procurement, breeding, boarding, feeding and wherever possible include a copy of the institution's standardized costs for these tasks as they vary from institution to institution.

A cost quotation must be provided for any item(s) greater than \$10,000 or which total greater than \$10,000. Two (2) competitive quotes are required for item(s) costing more than \$25,000 or which total greater than \$25,000.

v. Materials and Supplies:

Provide details and justify / explain major items. Do not simply list items.

A cost quotation must be provided for any item(s) greater than \$10,000 or which total greater than \$10,000. Two (2) competitive quotes are required for item(s) costing more than \$25,000 or which total greater than \$25,000.

vi. Payments to Study Subjects:

Heart & Stroke allows well justified and reasonable reimbursements for required travel, parking, childcare, honoraria, or other items that would reduce barriers to participation.

vii. Publications:

Heart & Stroke will only provide support up to \$3,000 (\$2,000 for 2-year projects) for the duration of the award, of any application recommended for funding. Proper justification and a brief explanation are required.

All publication costs must be included within the allowable budget of the application.

viii. Other:

Provide justification / explanation for each item listed.

A cost quotation must be provided for any item(s) greater than \$10,000 or which total greater than \$10,000. Two (2) competitive quotes are required for item(s) costing more than \$25,000 or which total greater than \$25,000.

ix. Service Contracts:

Provide justification / explanation for each item listed.

A fully detailed contract for services proposed must be included with application. The service contract is to include:

- Overall explanation of the type of work to be completed (including term of the contract)
- Timelines for the work (broken down by each piece and the deliverables)
- Obligations of each party
- Expenses provided in detail (e.g., including type of work performed, hourly rate of pay/salary FTE, number of hours of work)

Any contracts for work to be done outside of Canada or by a non-Canadian company must fully detail (including a cost quotation) and explain why that organization was chosen and why that work could not be performed by a Canadian alternative.

Applicants requesting funds for services (over \$10K), where the applicant(s) appear to have the expertise to provide such services themselves, must justify why an outside provider is necessary.

x. Travel:

For the purpose of attending or presenting their research at a meeting, conference and or symposia that align with the proposed research:

- Heart & Stroke will only provide support up to \$3,000 for the duration of the award, of any application recommended for funding. Proper justification and a brief explanation of how each activity relates to the proposed research are required. The purpose and estimated cost (up to a maximum of \$3,000) of such travel must be given.
- Travel for this purpose is limited to one individual who is associated with this project but who does not receive remuneration from this project (ideally the PI).

For the purpose of advancing work related to the completion of the project:

- Heart & Stroke will provide travel support that is essential for the facilitation of work proposed, during the award, of any application recommended for funding. Proper and rigorous justification and a brief explanation of how each activity relates to the proposed research are required.

All travel requests must be included within the allowable budget of the application.

xi. Financial Contributions from Other Sources (if applicable):

Provide a brief explanation of any financial (not in-kind) contribution from other sources, if applicable. Please see section 6 “Partnered Funding”.

5) Clinical Trials

- a. Heart & Stroke regards clinical trials as prospective controlled observations on an incompletely tested new diagnostic or therapeutic technique or device, often in comparison with an accepted one. Randomized interventions and those with clinical end-points would qualify. Applications will be examined for excellence in clinical questions and the appropriateness of the methodology. All clinical trial applications will be reviewed by the appropriate sub-Committee.

For other applications, including clinical studies with patients that seek to refine current characterizations of disease processes (or health) or to explore unresolved questions in human biology by controlled observations or manipulations (or both) of patients or volunteers and their environments (e.g., extrinsic factors such as diet, exercise, stress); these will be reviewed by the appropriate sub-Committee using similar criteria used for the evaluation of other applications.

- b. If surrogate outcomes are used in the trial, the applicant must be fully prepared to support their use.
- c. The requested budget must conform to the funding restrictions as outlined in the guidelines.
- d. Applicants are requested to indicate if their application is a clinical trial.

As part of the post-grant administration process, clinical trials funded by Heart & Stroke will be monitored on an on-going basis.

6) Partnered Funding

The applicant is required to declare all secured and proposed (i.e., submitted in the same funding cycle) partnered funding at the time of submission. There can be no overlap/duplication in expenses or activities with partnered funding.

For Proposed Partnered Funding (i.e., submitted in the same funding cycle): Heart & Stroke's peer review panel will provide Heart & Stroke with an opinion as to whether Heart & Stroke portion of the project could proceed independently of the partnered funding, if needed. If recommended by Heart & Stroke's peer review committee, Heart & Stroke-approved projects with partnered funding would be encumbered pending confirmation of sufficient funding to complete the project, to be provided by the applicant during the encumbrance resolution phase.

Proposed partnered funding MUST be secured by 01 July 2022; otherwise, the Heart & Stroke funds will be released to the next highest-ranking application (i.e., no deferrals or extensions to accept a GIA offer will be permitted).

Partnership with other funding organizations will be considered. However, please see item #7 Top-up Funding or Duplication of Funding.

Details to include in the Secured and/or Proposed Partnered Funding (i.e., in the same funding cycle) Letter should include:

- Identification of each partner, the specific role and a detailed breakdown of each partner's (secured and/or proposed) contribution, as it relates to the GIA submission.

7) Top-up Funding or Duplication of Funding

Heart & Stroke does not allow top-up funding for applications that have had their budgets reduced by another funding agency.

Heart & Stroke does not permit an applicant to hold a GIA that is similar or comparable to another operating grant from another funding agency.

8) Multi-Centre/Site Application

Where a research project involves multiple centres/sites by reason of location of activity and/or investigators, Multi-Centre/Site GIA applications must demonstrate benefit to all centres/sites involved. It is the responsibility of the applicant to ensure that applications demonstrate the following:

- A high probability of informing policies, practice, programs and/or science.
- Significant "value-added" to perform a particular project across centres/sites.
- A research design reflecting work done in each centre/site.
- Roles and responsibilities of each team member located in each site/centre.
- These projects cannot exceed the maximum allowable requested budget of \$100K/year with a maximum duration of 3 years.

9) Contact Information:

Heart & Stroke's physical office locations are closed until at least November 2021. For any questions or concerns, the recommended form of communication is email. Your email will go to a research email inbox which is regularly accessed by multiple research team members and is the best way to get a timely response.

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