



**Heart and Stroke Foundation of Canada  
CIHR Institute of Circulatory and Respiratory Health**

**Request for Applications  
Monitoring and Optimizing CPR 2010**

The Heart and Stroke Foundation of Canada and the CIHR Institute of Circulatory and Respiratory Health seek to fund research in the area of monitoring (assessing/evaluating) and optimizing the technical aspects or technique of CPR, which will ultimately result in enhanced quality CPR and improved outcomes in both adult and paediatric populations.

Findings from this initiative should also contribute to guidelines for resuscitation. The implementation of new guidelines or programs will be more effective when introduced within an evidence-based framework.

A secondary objective is to build capacity in resuscitation research in Canada. Applications that incorporate trainees and new investigators are strongly encouraged.

**Timelines**

December 1, 2009	Launch of Request for Applications
March 1, 2010	Letters of Intent due
April 1, 2010	Notification of results of Letter of Intent stage Invitations for full applications
June 23, 2010	Full applications due
November 1, 2010	Announcement of decisions
December 1, 2010	Anticipated start date
Up to 3 years	Duration of grant
Up to \$200,000 per year	The maximum amount per grant, including equipment, staff and travel

## Introduction

Resuscitation is one of the three strategic priorities of the Heart and Stroke Foundation's Federation Research Fund. Background syntheses and a 2006 Resuscitation Research Forum narrowed the priority areas in resuscitation research to the following three: 1) knowledge transfer: community; 2) knowledge transfer: health care providers; and 3) monitoring and optimizing CPR (the science around CPR).

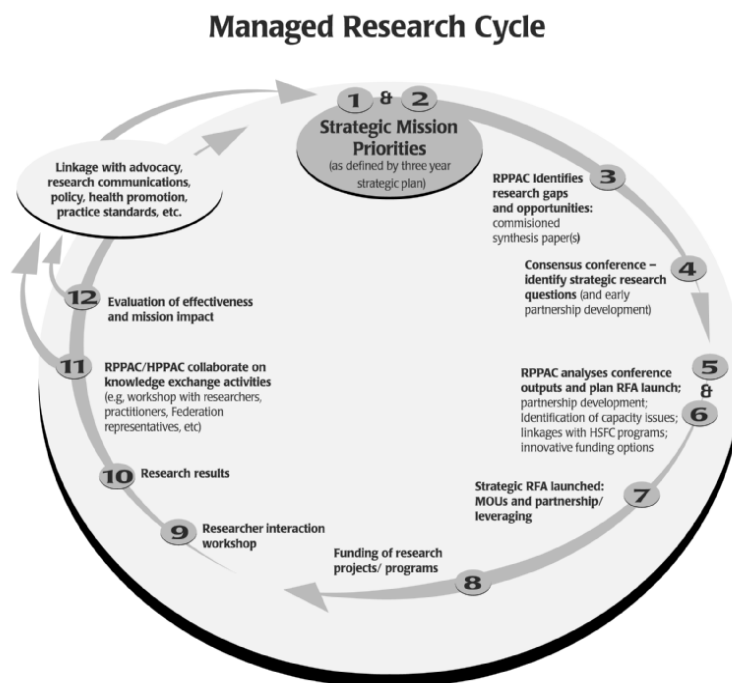
In December 2006, the Heart and Stroke Foundation of Canada (HSFC) partnered with the Canadian Institutes of Health Research (CIHR)'s Institute of Circulatory and Respiratory Health (ICRH) to launch a Request for Applications to support research exclusively in area 3.

HSFC and ICRH once again seek to fund further research in this area, Monitoring and Optimizing CPR, which will ultimately result in enhanced quality CPR and improved outcomes in both adult and paediatric populations. It is anticipated that research findings supported by this initiative will also contribute to guidelines for resuscitation.

*(Note: a Request for Applications in areas 1 and 2, Knowledge Transfer: Community and Health Care Providers, was launched simultaneously in December 2006 and is being re-launched at the same time as this initiative.)*

This Request for Applications is being launched through the Federation Research Fund's *Managed Research Cycle (MRC)*. The MRC is an approach to funding research that links research outcomes to the end users. The goal is to accelerate the transfer of research results into policy and practice. For more information, please refer to the following link:

<http://www.hsf.ca/research/fund/about.html>.



## Background

In February 2006, HSFC hosted a Resuscitation Research Forum in Vancouver which was attended by researchers, clinicians and representatives from governments, non-government organizations, academia, partner agencies and industry. The objective of the Forum was to identify specific areas of Canadian resuscitation research strengths, priorities, opportunities and capacities that HSFC and partners could address through funding initiatives.

From the Forum, the following six priority areas were identified: 1) resuscitation care and treatment across the continuum of care; 2) the need to support the development of a national database; 3) knowledge transfer: community; 4) knowledge transfer: health care providers; 5) monitoring and optimizing CPR; and 6) patient outcome measures. A small subset of advisors subsequently narrowed the priority list of six to three, recognizing the immediate needs in supporting research in knowledge transfer of resuscitation strategies as well as monitoring and optimizing CPR.

To date, HSFC has led a number of activities to help address knowledge gaps in resuscitation. Jump Start Resuscitation, a new Personnel Award program aiming to build greater capacity for resuscitation research in Canada and to support the next generation of researchers who will contribute to advancing knowledge and improving the quality of patient care and patient outcomes in this important area, was announced in June 2009. Monitoring and Optimizing CPR and Resuscitation and Knowledge Transfer: Community and Health Care Providers were launched in 2006 to support operating grants. Additionally, a Resuscitation Researcher Interaction Workshop was held in November 2008. Priorities previously identified, in combination with the discussion arising from the Workshop, suggest the need to support further research into resuscitation science.

## The Partners

The **Heart and Stroke Foundation of Canada**, a volunteer-based health charity, leads in eliminating heart disease and stroke and reducing their impact through the advancement of research and its application, the promotion of healthy living, and advocacy. The Foundation is a leading funder of heart disease and stroke research in Canada and is committed to supporting research across the full spectrum.

The **Canadian Institutes of Health Research (CIHR)** is Canada's premier federal funding agency for health research. Its objective is to excel, according to internationally accepted standards of scientific excellence, in the creation of new knowledge and its translation into improved health for Canadians, more effective health research services and products and a strengthened Canadian health care system.

The mission of the CIHR **Institute of Circulatory and Respiratory Health (ICRH)** is to support research into the causes, mechanisms, prevention, screening, diagnosis, treatment, support systems, and palliation for a wide range of conditions associated with heart, lung, brain (stroke), blood, blood vessels, critical and intensive care, and sleep. ICRH will consider funding highly ranked relevant applications based on availability of funds.

## **Project Scope**

Examples of research areas include, but are not limited to, the following:

- How to manage compression interruption
- Human factors, e.g., education, attitudes, collaboration skills, socioeconomic indicators
- Impact of real time feedback on CPR outcomes
- Impact of technique on CPR outcomes
- Use of novel technology quantifying CPR as outcome measure in CPR intervention trials

Examples of research questions that may be supported under this Request for Applications include, but are not limited to:

- What are the determinants of health that influence the ability and/or willingness to perform lay person CPR?
- What is the impact of real time, immediate, post event feedback technology on CPR outcomes in the paediatric population?
- How do we measure and improve the quality of by-stander CPR?
- What is the most efficient and effective CPR process for infants and children?
- Are CPR prompt devices effective in improving CPR quality? Does quality of CPR matter? Does using a CPR prompt device effect outcome?
- Does monitoring of physiologic variables (with feedback) during or after cardiac arrest affect outcome?
- What is the impact of different methods of CPR instruction on willingness to perform CPR, quality of CPR, retention of resuscitation skills?
- Should bystanders ever perform ventilations? Should health care providers? When and how often?

## **Eligibility**

The Principal Applicant must be based at a Canadian post-secondary institution or an affiliated hospital or research institute. Individuals from public, community or private sector organizations that are active in areas relevant to the themes of this Request for Applications are eligible to apply as Co-Applicants and Collaborators.

For more details, please see the [Guidelines for Strategic Research Initiatives](#).

## **Peer Review and Evaluation Criteria**

HSFC's peer review process will be used to assess the scientific excellence of applications. The review committee will be created specifically for this competition. Committee members will be selected based on suggestions from the funding organizations and other sources. Names of committee members will be available upon request. The peer review process will be conducted according to HSFC's and CIHR's standards and guidelines.

The funding partners will invest in high quality projects that are among those deemed to be very good to excellent through peer review. Projects will be funded from the top-ranked down, based on the total funds available for the initiative. Applications receiving a score less than 3.5 will not be considered for funding.

Letters of Intent must be submitted prior to submitting the full proposals. Evaluation of the Letters of Intent, including assessment of relevance to the initiative, will be completed by a peer review panel. Delegates from HSFC and CIHR will also take part in the relevance review. The criteria for assessing the Letters of Intent include:

- Relevance to the objectives of the initiative
- Scientific rigor
- Potential impact
- Feasibility

At the full application stage, the evaluation criteria include:

- Track record of investigators and strength of qualifications
- Strength of the proposal
- Appropriateness of the budget requested
- A clear plan for Knowledge Transfer and Exchange, referred to as Knowledge Translation<sup>1</sup> by CIHR.

## How to Apply

There are two stages in the application process:

### i) Letter of Intent

Applicants must submit **one original Letter of Intent (LOI)** and **one CD containing a PDF** of the LOI and attachments. LOIs must be received by HSFC by 4:00 p.m. on March 1, 2010. The LOI consists of:

- a) A duly completed LOI form indicating the names of the investigators, keywords, title of project, and institutional information.
- b) Two pages describing the proposed project and how it is relevant to the objectives of the Monitoring and Optimizing CPR 2010 initiative.
- c) One page (maximum) describing Knowledge Transfer and Exchange (KTE) strategies. For more information, please see HSFC's [KTE in Research: A Guide for Applicants and Reviewers](#).
- d) Attachments 1) an abbreviated CV (maximum 2 pages) which must include information on grants held, relevant publications from the last five years and expertise key words for the Principal Applicant and any Co-Applicants; and 2) a short bibliography of references cited in the LOI.

### ii) Full application

Full applications must be received at the HSFC office by 4:00 p.m. on June 23, 2010. Please submit **one original** and **one CD containing a PDF** of the full application.

Applicants must use HSFC's Monitoring and Optimizing CPR 2010 application form (available at [www.hsf.ca/research](http://www.hsf.ca/research)) and comply with the requirement to include an appropriate structured lay summary of the proposed work and a KTE plan.

Personal information must be provided using the Canadian Common CV. For details, please refer to [www.commoncv.net/index\\_e.html](http://www.commoncv.net/index_e.html).

### **CD Submission Instructions**

The PDF must be organized in the same order as the paper application. Attachments should be inserted within the application as appropriate. The file name should be in the following format: MonOptCPR 2010 Last Name.pdf.

The CD label must contain the following information:

- Last name
- Monitoring and Optimizing CPR 2010
- Short title
- Date

### **Applications must be sent to:**

Heart and Stroke Foundation of Canada  
Research Department  
Monitoring and Optimizing CPR 2010  
1402 - 222 Queen Street  
Ottawa ON K1P 5V9

<sup>1</sup> CIHR defines Knowledge Translation as “a dynamic and iterative process that includes synthesis, dissemination, exchange and ethically sound application of knowledge to improve the health of Canadians, provide more effective health services and products, and strengthen the health care system.” For more details, please visit <http://www.cihr-irsc.gc.ca/e/39033.html>.