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Introduction

The Canadian Respiratory Research Network (CRRN) will offer grant funding up to a maximum of $212,000 for a 2 year project for an early or mid-career investigator. Two grants will be awarded in this competition. The theme of the project must be asthma and/or chronic obstructive pulmonary disease (COPD). The project should interact and intersect with as many CRRN platforms and investigators as possible. Grant funding will be awarded for two years and is not renewable. Information and policies are provided in the following pages.

Registration must be received no later than **NOVEMBER 1ST, 2016**

Full Application must be received no later than **DECEMBER 1ST, 2016**

Submit your documents to CRRN c/o:

Kathy Vandemheen at kvandemheen@ohri.ca

The forms may be downloaded from the CRRN website at www.respiratoryresearchnetwork.ca

About the Canadian Respiratory Research Network

The Canadian Respiratory Research Network (CRRN), in close partnership with the Canadian Lung Association, the CIHR, and other partners, will improve patient care and outcomes for patients with chronic respiratory disease. We will do this through creation of an enduring national network of investigators and research platforms to enable innovative, collaborative, respiratory health research that influences decision making and ensures high quality training and career development of a new generation of investigators.

CRRN's Mission

The goals of the CRRN are to bring together researchers across disciplines and research themes/pillars to work together in a coordinated fashion in order to improve understanding of the origins and progression of chronic airway diseases in Canada.

We will:
1. Accelerate respiratory research that has worldwide impact on improving patient care
2. Enrich and augment opportunities for respiratory research and capacity building
3. Train and mentor researchers with trans-disciplinary expertise who can produce cutting-edge respiratory research; and
4. Spearhead knowledge translation, educational outreach and community engagement to improve diagnosis, management, and health outcomes of patients with respiratory disease nationally and globally.

The CRRN Grant Proposal

The objective of the CRRN Grant Proposal is to build Canadian research capacity that contributes to the field of asthma and/or chronic obstructive pulmonary disease (COPD). Funding may support individuals completing research related to at least one of the 4 CIHR Themes/Pillars. Your application will be reviewed in detail by at least two reviewers. The reviewers rank the applications according to:

a) the quality of the applicants (academic record, research experience and potential, and documented publication(s) (20%)
b) the quality of the research project (50%)
c) the research environment, including the co-applicants with whom the principal applicant intends to work (10%)
d) the applicants' ability to link to and collaborate with established CRRN platforms and scientists (20%)

Eligibility

Eligible nominated principal applicants must hold an academic appointment at a Canadian university and/or research institute. The nominated principal applicant must be an early or mid-career investigator, defined as an investigator who is within 10 years of his/her first academic appointment. CRRN funding must be held at a Canadian institution. Priority will be given to Canadian citizens, permanent Canadian residents or landed immigrants.

Investigators who currently hold or have received funding from the CRRN are INELIGIBLE for this competition as the nominated principal applicant. This includes operating grants, pilot study grants, studentships, fellowships, ERLI awards or platform funding. The nominated principal applicant is expected to be an investigator who has never before received CRRN funding. Co-applicants on the proposal are allowed to hold/have CRRN funding.

Registration Date

All applicants should register their intent to apply by submitting a one (1) page summary of the proposed research and a list of all co-applicants involved in the research to CRRN c/o kvandemheen@ohri.ca no later than **NOVEMBER 1ST, 2016**.

Submission Date

All applications must be received at the CRRN c/o kvandemheen@ohri.ca no later than **DECEMBER 1ST, 2016 (5 pm Eastern).**

Instructions for Submitting an Application

The forms may be downloaded from the CRRN website at www.respiratoryresearchnetwork.ca

1. ONE (1) electronic copy of the application is required. The electronic copy must include a completed copy of the application form with all the relevant documents and signatures. The signatures should be scanned and submitted electronically with the main application.

2. Do not use additional pages except where indicated. Keep the application as clear and concise as possible. Note that copies of your publications are not required.

3. Enter 'Nominated Principal Applicant' name in header of all forms submitted.

    Applicants are expected to include within the body of their application, and not in the appendices, all essential information required to permit assessment of the application.

4. A complete, printed copy of the nominated principal applicant's CV and all co-applicants using the CIHR Common CV (CIHR academic CV) should be included in the application package. **Failure to comply or the submission of an incomplete CV Module may result in the application being rejected.**

General Conditions of Funding

The following general conditions apply to project funding given by the Canadian Respiratory Research Network (CRRN).

1. The CRRN assumes no responsibility for accidents, illness, or claims arising out of studies, work, or other activities undertaken with financial support provided by the CRRN.

2. Copyright of all publications belongs to the author(s). However, in **any publication arising from the projects supported by the CRRN, acknowledgement of funding received from the CRRN is required.** It is understood that the name of the successful applicant, his/her field of study and some content of the abstract and final report to the CRRN will be made public. Successful applicants are expected to facilitate knowledge translation in their field of expertise through presentations at conferences and/or workshops, including, where feasible, conferences and workshops

3. Any commitments (or expenditures) incurred by an award recipient either in excess of the current funds or beyond the term of the award is the responsibility of the recipient.

4. The award recipient (or the institution on his/her behalf) shall, if the need arises, immediately notify the CRRN of his/her inability, for any reason, to complete the project for which support was awarded.

5. The Project funding award is valued at $212,000 maximum. Ideally the project would be completed within 2 years; however, additional time may be permitted depending on the terms of the project.

7. Progress Report: A brief one-page progress report should be submitted to the CRRN in December 2017, prior to release of the second year of funding installments. The report should document commencement of the project, progress made, and knowledge translation achievements (eg. papers, presentations, abstracts etc).

8. All projects involving human/animal investigation must be accompanied by a letter of approval from the ethics committee of the university or other institution(s) in which the work is to be undertaken. If the ethics approval is not available at the time of submission then it needs to be sent to the CRRN as soon as possible. No funds will be made available until this letter of approval has been received at the CRRN.

9. The CRRN project funding will start on January 1, 2017.

Review Process

1. Applications will be received at the CRRN Coordinating Centre in Ottawa. Members of the CRRN Scientific Steering Committee or other delegated CRRN investigators will review all applications and supporting materials.

2. The Committee will meet in December 2016 to make funding recommendations. Funding announcements will be made in late December 2016.

3. A letter of notification including rationale for the decision regarding funding will be sent out to all applicants.

4. The successful applicant will be required to present their proposed project at the CRRN Investigator Meeting in Ottawa on January 12th and 13th, 2017. This will be a 15 minute presentation of the proposed project. Presentation at this meeting is mandatory for the successful applicant. Travel costs to attend the meeting will be provided to the applicant by the CRRN.

Financial Administration

1. Recipients of CRRN Project funding are permitted to receive funding from other sources providing there is no overlap in project funding. Please inform the CRRN of other amounts received.

2. Awards are typically for two years (24 calendar months) from the date stated in the letter announcing the award or as otherwise agreed; however, this may be amended based on the project timelines.

3. Funds will be disbursed by the CRRN quarterly in January, April, June, and September.

4. The Financial Officer in your Institution who deals with such funds will administer the award. He/she will complete and submit CIHR Form 300 financial reports to CRRN by April 30th annually. Please include the name and address of the Financial Officer responsible for administering your award.

5. The CRRN reserves the right to terminate further payments and request a refund of the award in the event that the recipient fails to fulfill the conditions specified.

6. In the event of termination of the research project during the award period, you must immediately notify the CRRN in writing. Unspent funds in the account must be refunded to the CRRN. The recipient must contact the Institutional Financial Officer and request that the funds be reimbursed.

Completion of Award

The CRRN requires a final report at the end of the funding period. A list of relevant publications and presentations should be appended.

Knowledge Translation[1]

Successful applicants will be highlighted on the websites and funding reports of the CRRN. Publication of the research in a suitable, refereed professional journal, as soon as possible after completion of the study, is encouraged. Acknowledgement of CRRN support is *required* in all publications or presentations.

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[1] **CIHR Definition of Knowledge Translation:**
- making users aware of knowledge and facilitating their use of it to improve health and health care systems
- closing the gap between what we know and what we do (reducing the know-do gap)
- moving knowledge into action

Appendix 1: CRRN Research Platforms

Air Pollution Exposure Platform – Lead: Dr. Christopher Carlsten

Goals:
- To integrate the COPD cohorts into APEL (Air Pollution Exposure Laboratory)'s well-developed exposure model
- To address key questions of mechanism and biological plausibility of observations linking air pollution with COPD, connecting to public health concerns
- To demonstrate that traffic-related air pollution augments subclinical (biomarker) and clinical (lung function) elements of airway disease in smokers at risk for developing COPD

Basic Science & Discovery Platform – Lead: Dr. Andrew Halayko

Goals:
- To identify markers and mechanisms of disease origin and progression that can be targets for novel drug and biomarker discovery for future pre-clinical studies and network clinical trials
- Interrogate biological specimens from human subjects in current cohorts for comprehensive molecular characterization.

Biomarker Platform – Lead: Dr. Don Sin

Goals:
- To determine novel molecular targets of airway disease as a foundation for biomarker discovery.
- To use emerging genomics and proteomics tools to better phenotype cohorts and to develop novel biomarkers to predict development and progression of chronic airway diseases.

Environmental Health Platform – Lead: Dr. Teresa To

Goals:
- To use population-based epidemiological data to measure respiratory health effects of individual air pollutants and climate change

- To identify high-risk subpopulations (age, sex, smokers) or clusters (rural/urban living, SES) to determine the effects of different air pollutants and climate mixtures on the development, exacerbations and progression of asthma and COPD

Health Economics Platform – Lead: Dr. Mohsen Sadatsafavi

Goals:
- Develop the first Canadian comprehensive disease simulation models of asthma and COPD in which the impact of technologies can be evaluated.
- Evaluate the cost-effectiveness of a screening and treatment strategy for undiagnosed airway disease at the community level.

Health Services Research Platform – Lead: Dr. Shawn Aaron

Goals:
- To determine the burden of undiagnosed airway disease (asthma and COPD) in at-risk Canadian adults.
- To determine whether early treatment of newly diagnosed airflow obstruction affects patient quality of life and health outcomes.

Imaging Platform – Lead: Dr. Grace Parraga

Goals:
- To expand use of novel CT and MRI for COPD patient phenotypes to 4 or 5 geographical nodes in Canada
- To enable novel pulmonary imaging platforms across CRRN nodes and investigators for future studies (ex. proof of concept RCTs of novel therapies in asthma, CF or COPD).

Pharmaco Epidemiology Platform – Lead: Dr. Francine Ducharme

Goals:
- To use pharmacoepidemiological data to determine if poor control of airway disease in asthmatic preschoolers leads to increased severity and progression of chronic airway disease in later life
- To determine whether poor control of asthma in pregnant mothers leads to increased severity and progression of chronic airway disease in their offspring.

Physiology Platform – Lead: Dr. Denis O'Donnell

Goals:
- To identify the most sensitive test(s) of peripheral airway dysfunction for earlier diagnosis and more accurate prognosis of smokers and non-smokers who are susceptible to airway injury.
- To support the other CRRN platforms by providing a comprehensive physiological characterization and phenotyping of small airway dysfunction.

Population Health Platform – Lead: Dr. Andrea Gershon

Goals:
- To conduct innovative, collaborative, quality respiratory disease research that improves the health of populations of people with respiratory disease
- The Population Health Platform will make use of health administrative databases and other population-level data, to assist network researchers in achieving CRRN research goals

CanCOLD Cohort Platform – Leads: Dr. Jean Bourbeau and Dr. Wan Tan

Goals:
- To prospectively follow a cohort of > 1300 participants from the Canadian population to identify potentially modifiable risk factors for COPD besides cigarette smoking.
- To serve as a resource for multiple network studies and platforms

Behavioural Science Platform – Leads: Dr. Simon Bacon and Dr. Kim Lavoie

Goals:
- To determine the role of health behaviours (e.g., smoking, physical activity, diet, adherence) and psychological factors (e.g., stress, anxiety) as predictors, outcomes, mediators, and moderators in respiratory research
- To promote the use of evidence-based communication and behaviour change skills among healthcare providers to improve respiratory disease management and outcomes