GenomeCanada

Request for Applications
2012 Large-Scale Applied Research Project Competition

Genomics and Personalized Health
A Genome Canada – CIHR Partnership

National Co-Funding Opportunities

A number of organizations have worked with Genome Canada to provide co-funding opportunities associated with this competition that are available to researchers located anywhere in Canada. A list of these opportunities can be found below and more information in the appendices**.**

1. Through this RFA Genome Quebec is promoting the use of CARTaGENE biobank data and samples in support of projects relevant to genomics and personalized health. Projects, involving researchers from Quebec that make use of CARTaGENE resources are eligible for additional co-funding from Genome Quebec. For more details see **Appendix 1.**

2. Through this RFA the Foundation of Ataxia Charlevoix-Saguenay will consider providing co-funding to projects in the area of genomics and personalized health that will lead to the development of better diagnostic tools and therapeutic strategies for ARSACS that may also be applicable to other disorders related to mitochondrial dysfunction. For more details see **Appendix 2.**

3. Through this RFA the Canadian Partnership Against Cancer (CPAC) is promoting the use of the Canadian Partnership for Tomorrow Project (CPTP), a legacy population-based cohort designed to support a broad range of research questions but is particularly well suited to studies in personalized medicine. CPAC will also consider providing co-funding to support proposals specifically addressing cardiovascular disease that draw upon and whose findings have the potential to enrich cohort resources. For more details see **Appendix 3**.

4. Through this RFA the Leukodystrophies Foundation will provide co-funding to research projects which could help elucidate the pathophysiology of Pol III-related Leukodystrophies, i.e., tremor-ataxia with central hypomyelination (TACH); hypomyelination, hypodontia and hypogonadotropic hypogonadism (4H) syndrome; or leukodystrophy with oligodontia (LO), and lead to breakthroughs in the treatment of these and other related leukoencephalopathies. For more details see **Appendix 4**.

Appendix 1. National Co-Funding Opportunity from Génome Québec

I. Background

In partnership with national and international leaders in life sciences, Génome Québec is dedicated to increasing the competitiveness of the genomics innovation system to maximize its economic outcomes in Québec, through funding of major genomics research initiatives and putting the necessary tools in place for the field's scientific and strategic development. The purpose of this Génome Québec funding opportunity is to promote the use of the CARTaGENE biobank data and samples and other Génome Québec-supported biobanks within the Genome Canada 2012 Large-Scale Applied Research Project Competition in Genomics and Personalized Health.

CARTaGENE (www.cartagene.qc.ca) is ***a population-based biobank in Québec, with high-quality data and samples from over 20,000 participants***, aged 40-69, from four metropolitan areas (Montréal, Québec, Sherbrooke and Chicoutimi) covering a territory that includes about 2/3 of the Québec population. The selected age group represents a population at specific risk of developing chronic diseases and provides an ideal foundation for longitudinal studies of health and disease in an aging population. Participants were deeply phenotyped and a number of different biological samples were collected and stored while biochemical and hematological analyses were performed. Substantial biological material is preserved for genomic and other analyte studies. Overall, the participants provided 446 socio-demographic, life-style and health data (age, gender, family history, health history, medication, etc.), 190 physiological parameters were measured (height, weight, blood pressure, bone density, respiratory volume, etc.), 22 biochemical analyses (lipid profiles, liver function markers, renal function markers, etc.) and 41 hematological profiles (complete blood cell counts, electrolytes, etc.) were collected at time of recruitment. The biological samples include 11 collection methods for blood samples, as well as plasma, serum and urine samples. Finally, linkage to government health data and related information is also available. It is a high-quality, endophenotypically deep, biobank that provides scientists with samples and data for a wide range of analyses concerning genetic, genomic, epidemiological, environmental and social determinants, and their interactions, for the incidence of chronic diseases and their evolution.

Any project in personalized medicine requires at its inception a cohort of participants for discovery, replication and/or non-clinical validation of biomarkers and diagnostics. In this, CARTaGENE is a key stepping stone for research in personalized medicine. CARTaGENE also complements individual research programs where data and/or samples for replication or controls are required. The pooling or combination of existing cohorts with that of CARTaGENE will synergistically enhance both resources and the outcome is likely to be a rapid and powered assessment of various traits, whether it is for increasing the samples size, for comparison or for replication/validation.

CARTaGENE is a springboard for bioscience and biomedical research in Québec and abroad and an invaluable tool for the promotion and implementation of personalized medicine. Therefore, it is perfectly aligned with the scope of the Genome Canada 2012 Large-Scale Applied Research Project Competition in Genomics and Personalized Health.

II. Funds available

Génome Québec would like to support projects that demonstrate the use and value of the CARTaGENE cohort leading to short term socioeconomic impact in personalized medicine.

Within Genome Canada competitions, Génome Québec funds up to 35% of the approved eligible costs for research done in Québec, to the maximum amount provided in the Genome Canada Notice of Award (NOA).

In addition to this funding, Génome Québec intends to commit another $1M for Québec researchers who wish to integrate the use of CARTaGENE within their 2012 Large-Scale Applied Research Projects.

The CARTaGENE resource is available to all scientific researchers working in a public or private organization at the national or international level but funding from Génome Québec within this competition is restricted to Québec researchers affiliated with an eligible Québec institution.

III. Eligibility for Génome Québec funding for CARTaGENE

Génome Québec will only support eligible projects that meet all Genome Canada requirements based on the RFA for the Genome Canada 2012 Large-Scale Applied Research Project Competition in Genomics and Personalized Health. This funding will be restricted to projects selected by the Genome Canada peer review process.

All researchers who plan to integrate CARTaGENE into their large-scale project must contact the Client Management Office at the McGill University and Génome Québec Innovation Centre (Phone: 514-398-7211 email: infoservices@genomequebec.com) after the Genome Canada registration stage to obtain a statement of work.

IIIa. Investigator eligibility

- Researchers affiliated with a Québec academic institution (including hospitals and research institutes) whether they are the project leader, co-project leader or co-applicant in a Genome Canada proposal. Projects led by other provinces are also eligible to receive funding if a Québec co-applicant is involved and has a dedicated Québec budget.
- Researchers from industry and federal departments or agencies are not eligible for this funding.

IIIb. Funding

The maximum funding for the CARTaGENE component will be 5% of the total budget up to a maximum of $500,000 per project for four years. Thus, Génome Québec will provide funding up to a maximum of 40% (35% + 5%) calculated on the Québec portion of the budget.

This funding can only be used for expenses incurred in Québec (including technology platform services).

IIIc. Eligible costs

This additional funding should be used to directly support activities central to the use of the CARTaGENE resource:

- access fees for samples/data of the CARTaGENE biobank
- costs related to the use of technology platforms for the analysis of CARTaGENE biological samples (genotyping, sequencing, etc)
- One salary directly linked to CARTaGENE data/sample analysis (maximum 1 FTE/year)

Contact:

For questions related to eligibility for this funding, please contact:

Stephanie Lord-Fontaine,
Program Director
Génome Québec
Phone: 514-398-0668 ext. 204
e-mail: slord-fontaine@genomequebec.com

Ataxia of Charlevoix-Saguenay Foundation

Appendix 2. National Co-Funding Opportunity from Foundation of Ataxia Charlevoix-Saguenay

Background

The Foundation of Ataxia Charlevoix-Saguenay was founded in 2006 to finance scientific research on Autosomal Recessive Spastic Ataxia of Charlevoix-Saguenay (ARSACS).

ARSACS is a debilitating hereditary and progressive childhood neurological disorder. Symptoms generally appear between the ages of 2 and 5 years old. Already at that age, the child's motor skills are affected. The disorder progresses throughout adolescence and adulthood (stiffness in the legs, increasing difficulty in walking, reduced manual dexterity, lack of coordination of the arms, speech difficulties, finally, the use of a wheelchair).

Ataxia affects the spinal cord and the peripheral nerves. The name of the disorder refers to the Charlevoix and Saguenay regions because the disorder is more frequent in these regions. However anyone whose ancestors came from France and settled in the St. Lawrence valley at the time of settlement of Québec in the 17th century can be a carrier of the mutated gene responsible for the Ataxia. The Ataxia gene can be passed through many generations without manifesting any symptoms.

It has been recently demonstrated that mitochondrial dysfunction is potentially involved in the mechanism of action explaining the molecular patho-physiology of ARSACS. More specifically, the mutated ARSACS protein sacsin impairs mitochondrial functionality, possibly by disrupting mitochondrial fission.

Since mitochondrial dysfunction is involved in diseases such as Alzheimer's and Parkinson's we believe that genomics research associated with these two diseases will help better understand ARSAC and more common neurodegenerative disorders.

Funds Available and Eligibility

Foundation of Ataxia Charlevoix-Saguenay will support projects that are focused on research that will lead to the development of better diagnostic tools and therapeutic strategies for ARSACS that may also be applicable to other disorders related to mitochondrial dysfunction.

Foundation of Ataxia Charlevoix-Saguenay will provide some of the co-funding as part of Genome Canada's 2012 Large-Scale Applied Research Project Competition in Genomics and Personalized Health to support projects that fall above the Genome Canada cut-off for funding. This co-funding will be conditional upon the teams securing sufficient additional co-funding from other sources and approval by the Foundation of Ataxia Charlevoix-Saguenay Board of Directors.

This co-funding opportunity is available to researchers working anywhere in Canada. Researchers interested in this co-funding opportunity must contact the Foundation directly to determine whether their proposal is relevant to the objectives of the Foundation.

Contact:

For questions related to this co-funding opportunity, please contact: Sonia Gobeil sgobeil @ctf.ca.
Also please consult the Foundation of Ataxia Charlevoix-Saguenay's website at www.arsacs.com

Appendix 3. National Co-Funding Opportunity from the Canadian Partnership Against Cancer

I. Background

The Canadian Partnership for Tomorrow Project (CPTP) was an early investment by the Canadian Partnership Against Cancer (CPAC) and is designed as a legacy population-based cohort of which CARTaGENE (www.cartagene.qc.ca) is a part (see Appendix 1). In addition to CARTaGENE, CPAC is supporting partner cohorts in Alberta, BC, Ontario and the Atlantic provinces. High-quality data and samples from a total of over 67,000 participants aged 35 - 69 are currently available but will continue to increase. The Canadian Partnership for Tomorrow Project provides scientists with samples and data for a wide range of analyses concerning genetic, genomic, epidemiological, environmental and social determinants, and their interactions, for the incidence of chronic diseases and their evolution. Local contacts in each area are provided below.

CPTP is a platform designed to support a broad range of research questions but is particularly well suited to studies in personalized medicine. It is well aligned with the scope of the Genome Canada 2012 Large-Scale Applied Research Project Competition in Genomics and Personalized Health.

Access to CPTP cohort

In order to obtain access to the CPTP cohort as part of the 2012 Genome Canada Competition, projects must demonstrate the use and value of the cohort in their studies. There are two possible mechanisms for access. 1) Researchers can request access to a single region by communicating with the specified local contact (see below) or 2) Researchers wishing to access data/samples from more than one region should apply through CPTP's national access arrangements via the National Coordinating Centre (contact below). For both procedures, access requests to the samples/data should be made before submitting a pre-application. A final request for access must be made before submitting the full application and any award shall be dependent on access being approved.

Contacts for access to a single region:

Alberta: Dr Paula Robson at Alberta Health Services (Phone: 780 643 4368 email: Paula.Robson@albertahealthservices.ca);

Atlantic provinces: Dr Louise Parker at Cancer Care Nova Scotia (Phone: 902 494-3566 email: louise.parker@iwk.nshealth.ca);

British Columbia: Dr John Spinelli at BC Cancer Research Centre (Phone: 604 675-8055 email: jspinelli@bccrc.ca) ;

Ontario: Dr Lyle Palmer at Ontario Institute for Cancer Research (Phone: 647 260-7819 email: lyle.palmer@oicr.on.ca)

Quebec: Client Management Office at the McGill University and Génome Québec Innovation Centre (Phone: 514-398-7211 email: infoservices@genomequebec.com) or via http://www.cartagene.qc.ca/index.php?option=com_content&task=view&id=94&Itemid=83&lang=english.

For access to more than one region:

Formal requests for access to a single region should be made according to local procedures. National Coordinating Centre, contact Greg Martyn (Phone: 416 915 9222; email Greg.martyn@partnershipagainstcancer.ca).

II. Funds available

As part of a forthcoming competition, CPAC would like to support proposals specifically addressing cardiovascular disease that draw upon and whose findings have the potential to enrich cohort resources. Full details of this funding opportunity will be announced in April 2012. CPAC will assess the eligibility of these projects through a process determined by CPAC.

III. Eligibility

CPAC will only support eligible projects that meet all Genome Canada requirements based on the RFA for the Genome Canada 2012 Large-Scale Applied Research Project Competition in Genomics and Personalized Health. This funding will be restricted to projects selected by the Genome Canada peer review process.

IIIa. Investigator eligibility

- Researchers affiliated with an academic institution (including hospitals and research institutes) whether they are the project leader, co-project leader or co-applicant in a Genome Canada proposal.
- Researchers from industry and federal departments or agencies are not eligible for this funding.

IIIb. Eligible costs

This additional funding should be used directly to support activities central to the use of the CPTP resource that are in line with CPTP's objective of deepening the characterization of the cohort with cardiovascular disease variables, for example:

- access fees for samples/data of the biobank
- costs related to the use of technology platforms for the analysis of CPTP biological samples (genotyping, sequencing, etc)

Contact:
For questions related to eligibility for this funding, please contact:
Dr Alison Spaull, Executive Director, CPTP, Phone: 416 915 9222; email: alison.spaull@partnershipagainstcancer.ca.

Canadian Partnership for Tomorrow Project
Projet de partenariat canadien Espoir pour demain

Appendix 4. National Co-Funding Opportunity from the Leukodystrophies Foundation

Background

The Leukodystrophies Foundation was created in 2006 with a goal to support research leading to the treatment of leukodystrophies, a heterogeneous group of inherited neurodegenerative disorders which primarily affect children. The Leukodystrophies Foundation has provided priority funding to research leading to the discovery of gene mutations that cause unknown types of the disease, their functional impact and the discovery of new treatments aimed at controlling and curing the disease.

Financial support from the Leukodystrophies Foundation has led to the identification, in 2011, of two new genes (*POLR3A* and *POLR3B*) responsible for three forms of leukodystrophies (TACH, 4H and LO)

Funds Available and Eligibility

The Leukodystrophies Foundation will fund research projects that focus on identifying how mutations in genes encoding the Pol III subunits result in a neuro-degenerative disease of white matter, as well as research that could open the way to innovative treatments. The Foundation is also interested in research that would contribute to the identification of other genes involved in leukoencophalopathy as well as the development of better diagnostic tools and therapeutic strategies for these disorders.

The Leukodystrophies Foundation will provide co-funding as part of the 2012 Large-Scale Applied Research Project Competition in Genomics and Personalized Health to support specific projects that score above the Genome Canada cut-off for funding. To be eligible for co-funding, the research teams will be required to secure additional co-funding from other sources and obtain the approval of the Leukodystrophies Foundation's Board of Directors.

This co-funding opportunity is available to any researchers working in Canada.

Researchers interested in this co-funding opportunity must contact the Foundation directly to determine whether their proposal is relevant to the objectives of the Foundation and meet the eligibility criteria for co-funding.

Contact: For questions related to this co-funding opportunity, please contact: Marjolaine Verville (mverville@leucofondation.com, 418-806-2968). Also please consult the Leukodystrophies Foundation website at www.leucofondation.com.