



GenomeQuébec



les solutions sont dans les gènes



Genome Canada Large Scale Applied Research Project 2017

Genomics and Precision Health

January 2017



GenomeQuébec

GENOME QUEBEC

- One of the six regional genome centers
- Position genomics as a driver of economic development
- Support Quebec teams in Genome Canada competitions
- Oversee post award management
- Promote access to genomic technology platforms



Promoting scientific excellence through collaboration

COMPETITION SCOPE

Precision health: Evidence based approach to decision making with regards to health care

- Prevention, diagnostic, prognostic, treatment
- Variability in genes, environment, lifestyle that affect risk factor, causes and disease pathogenesis
- Genomics, epigenomics, proteomics, metabolomics, bioinformatics, etc... at the core of the program
- All indications
- Applied project: Discovery, validation and translation of biomarkers, targets and omic signatures
- Better health outcomes, improved treatments, reduction in toxicity due to adverse drug responses, ...





RFA PROJECT EXAMPLES

- Markers informing dietary or behavioral choices in disease prevention strategies;
- Characterization of microbiome and association with diagnostic, risk stratification, and/or disease prevention;
- Diagnostic tools for screening programs;
- Genomic markers or variants leading to new treatments, devices and/or diagnostics;
- Genomic to identify novel targets/variants in disease for the development of new therapies or repurposing of existing drugs;
- Computational methods that will enable translation of genomic to the clinic;
- Analytical validation of clinical tools based on findings that have already been clinically validated elsewhere, to facilitate implementation in Canada;
- Implementation science approach to advance integration of genomics in health-care system by investigating: social, behavioral, economic, and management aspects;
- Clinical utility/cost effectiveness of implementing genomic-based methods of patient stratification, into the health-care system as compared to standard of care.

GENOME CANADA EXPECTATIONS



Deliverables: end product of the research activities that can have a clinical impact and will be taken up by the end user

Concrete deliverable(s) by the end of the funding period : new tests/process/services/products...

Project need to go beyond high impact publications, database/biobank creation, new scientific knowledge, training of HQP = scientific milestones of the research activities





END USER ENGAGEMENT

Will use research output to make informed decisions on health practices, policies, programs, product development.

Active (development/execution) end user engagement to ensure deliverables uptake:

- co-applicants
- collaborators
- translational/advisory committee members (can meet once a year)

From :

- Industry
- Publicly funded health care organizations
- Government departments- policy makers, regulatory agencies
- Patient advocacy groups



SOCIO-ECONOMIC BENEFITS

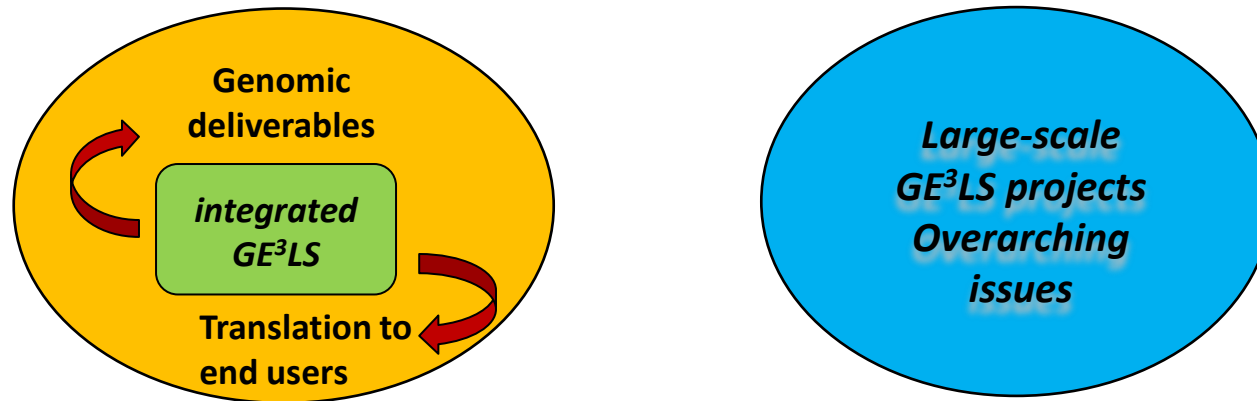
- Improve health outcomes and/or enhance cost effectiveness of the health care system
- Valuable treatments, tools or improved health care practices/policies
- Will happen after the end of project assuming uptake of deliverable by user
- Provide an assessment of the value of precision health care approach proposed in a health delivery context = Assumptions on economic /social impact when they are implemented by user
- Describe translation expertise and end user role
- Detailed translation plan (commercial or knowledge transfer) – Who, how and when?
 - Can include patient empowerment/patient reported outcomes
 - Could address the receptivity of a health care delivery organization





Genomics and its **ethical, environmental, economic, legal** and **social** aspects

Two types of GE³LS projects



Social sciences and humanities: implementation research, health administration, health management, health services research, health technology assessment, real-world evaluation and comparative effectiveness research.





INTEGRATED GE³LS

- Mandatory research component for each project (objectives, methods, deliverables, need to be novel and publishable)
- Strategically chosen **applied** research : **complementary** and **specific** to each project, with associated **budget**
- Close collaboration with **social scientists** to support **translation** of research deliverables into **socio-economic benefits**
- Need to address a barrier to implementation

Examples – (need to address at least **one** of the aspect)

- Economic: Cost benefit /effectiveness analysis with comparison of standard of care
- Legal: Regulatory challenges associated with drug repositioning
- Ethic/social: Patient and clinicians acceptance of product / assay / technology.





TEAM and EXPERTISE

Most teams are between 10 and 20 researchers

- Focus on quality, multidisciplinary – Get the best where they are
- Where applicable, look outside your university –national and international collaborations are valuable when getting to the validation stage

Expertise to cover all research activities

- Omics and technologies
- Clinicians / clinicians scientists
- Social scientist(s)
- Bioinformatics
- Statistical genetics
- Epidemiology
- Pathology
- End users/translation experts





EVALUATION CRITERIA

- Genomics is essential in terms of overall outcome
- Scientific excellence/originality/internationally competitive
- Technical feasibility with supportive POC data, access to existing cohorts/infrastructure and existing collaborations
- Alignment to a well defined clinical need and focused/realistic/concrete deliverables
- Potential for major socio-economic impact for Canada (and international)
- End users engagement and role in translation plan
- Strong knowledge transfer/commercialization plan and team expertise in translation





FUNDING AVAILABLE

44M\$ from GC + 26,5M\$ CIHR

- Around 15 projects will be funded
- CIHR funds: targeted to implementation, rare disease, breast cancer, HIV (see appendix 2 in RFA)
 - will select in the GC ranking list, same process

Co-funding :

- 50% GC • 35% GQ (expenses in QC) • 15% others
- Max GC contribution \$5 M/project
- Total budget: 2M\$ -10M\$ on 4 years (>10M\$ if more co-funding available)





CO-FUNDING

Eligible sources for Genome Canada:

- Companies
- Venture capital or other investment funds.
- Institutional funds, trust funds, foundations, philanthropic organizations
- Departments and agencies of the federal government (NRC, Economic Development Agencies)
- Departments and agencies of provincial and municipal governments
- CFI is eligible including IOF but **not** CIHR, NSERC, SSHRC, Canada Research Chairs, Networks of Centres of Excellence, CFREF

- Co-funding covered expenses can be eligible 6 months before NOA (after July 2017)
- Cash or in kind (non-cash eligible budget items which can be given a cash value)
- Historical cost of archived samples is not eligible
- Suppliers discounts are not eligible

ELIGIBLE EXPENSES

- Can cover all new direct incremental costs related to research project
 - Salaries,
 - Consumables,
 - Services such as technology platforms,
 - General and admin costs: traveling, publications, workshops, etc
 - Equipment BUT not construction, rent or renovation
- New clinical trial costs are eligible
- Indirect (overhead) costs are not eligible
- Genome funds can't go to fed labs or private companies

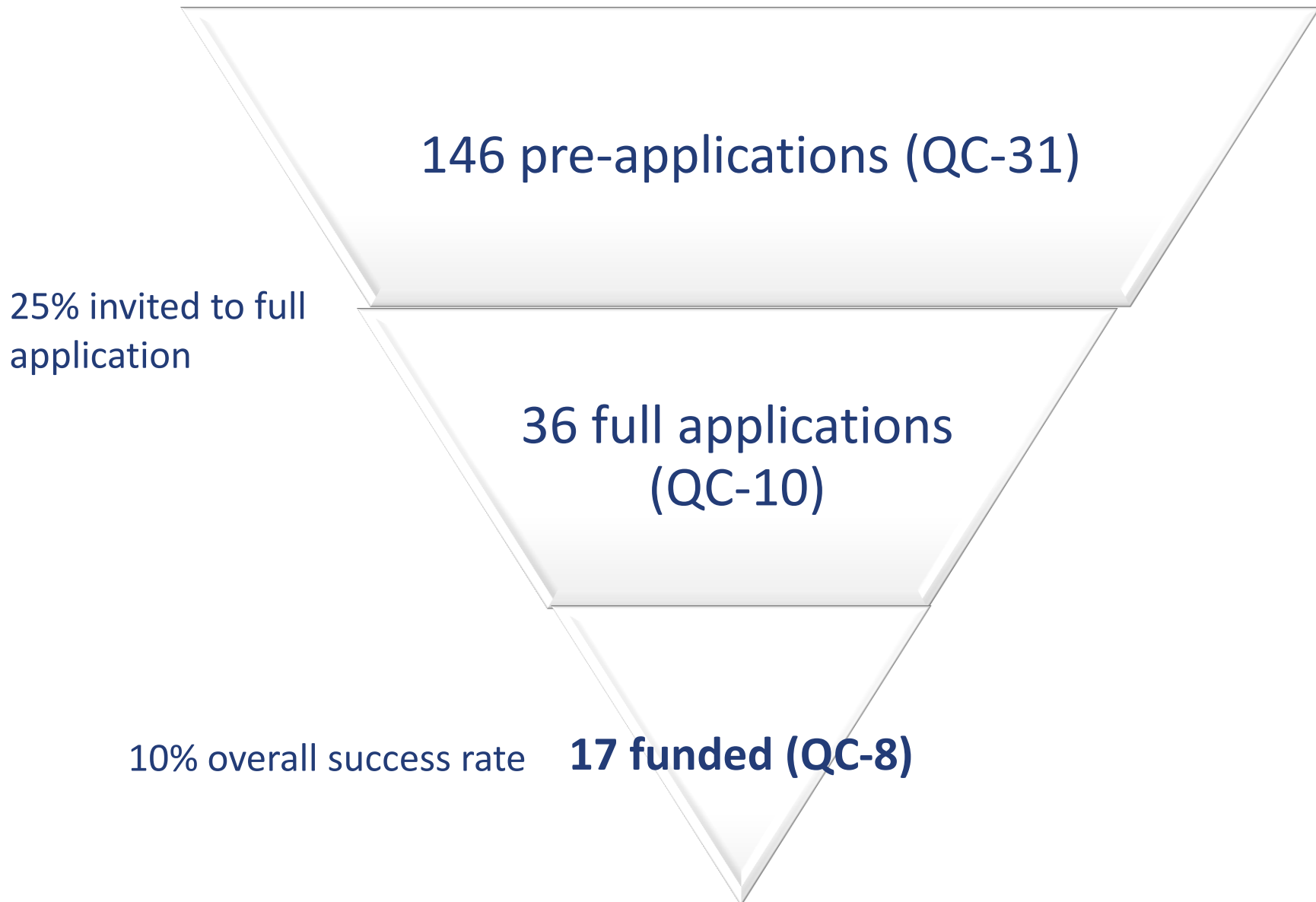
DEADLINES/PROCESS



Genome Québec

Actions	Génome Québec	Génome Canada
Launch		January 30 2017
Registration (mandatory but not reviewed)	March 13, 2017 -17h by email to slord-fontaine@genomequebec.com	March 16 2017
Pre-application	Submission to GQ: April 4 2017	May 11 2017
	Friendly peer review feedback in week of April 10	
	Final submission to GQ: May 8	
Project invited for full application by GC		Early July 2017
Full application	Early September 2017 Friendly peer review	October 5 2017
F2F review committee	Early November 2017- Practice for F2F	End of November 2017
GC BOD decision	December 2017, funding starts April 2018	

HEALTH LSARP 2012 -STATISTICS





GENOME QUEBEC'S ROLE

- Help research teams build competitive applications
 - Strategic advice
 - Friendly peer review : scientific, socioeconomic and GE3LS experts
 - Help with preparing the budget
- GQ track record: 60% (90M\$) of the GC funds for Quebec projects in 2012
- Contact with other genome centers / teams across Canada
- Facilitate access to leading edge technology platforms
- Foster partnerships : GE3LS, end users, collaborators outside Quebec
- Partnering event with industry planned for end of March 2017 (contact Diana Iglesias diglesias@genomequebec.com for more info)

DOCUMENTS AND FORMS

Available on GQ's website: <http://www.genomequebec.com/50-contests-2017-large-scale-applied-research-project-competition-genomics-and-precision-health.html>

- Genome Canada Request for Application
- Registration forms
- Pre-Application forms
- Genome Canada Guidelines for funding research projects

QUESTIONS?