

Societal Issues Round 2

Request for Applications

1. INTRODUCTION AND BACKGROUND

Genome British Columbia (Genome BC) is a catalyst for the life sciences cluster on Canada's West Coast and manages a cumulative portfolio of over \$850M in research projects and science and technology platforms. Working with governments, academia and industry across sectors such as forestry, fisheries, agriculture, environment, bioenergy, mining and human health, the goal of the organization is to generate social and economic benefits for British Columbia and Canada. Genome BC supports BC researchers through its own funding programs and also supports local applicants competing for national funding competitions including those run by Genome Canada. Please visit www.genomebc.ca for more information.

Genome BC recognizes the need for stand-alone projects that identify and study the societal issues that emerge from genomics-based¹ innovations. This may include, for example, researching broader themes of societal importance such as genetic discrimination and public perspectives of genomics application by sector; developing effective practices and policies for uptake of genomic-based applications; identifying when uptake would not be appropriate; or examining cross-cutting themes of societal importance.

Currently, there are few dedicated funding opportunities for this type of research. As part of its 2015-2020 Strategic Plan, Genome BC aims to enhance the breadth and scope of social sciences and humanities and related areas of study (SSH+)² and to facilitate SSH+ led collaborative projects related to genomics. In April 2016, Genome BC conducted two roundtable discussions with members of the research community from the social sciences, humanities and related areas of study. The intent of these roundtable discussions was the following: (1) to attract new capacity to Genome BC in the SSH+ space and encourage participants to share information on Genome BC with their colleagues; (2) to develop, through discussion and debate, initial ideas for pilot projects to be funded through the first Societal Issues Request for Applications (RFA) and projects suitable for other GBC funding schemes; and (3) to identify barriers to application to Genome BC for SSH+ researchers. These round tables led to the first Societal Issues competition, launched in 2016. Four projects were funded through that competition, all related to the health sector. Further feedback was sought from the community regarding that competition and has been taken into account in this RFA.

¹ Genomics is the science that aims to decipher and understand the entire genetic information of an organism (i.e. plants, animals, humans, viruses and microorganisms) encoded in DNA and corresponding complements such as RNA, proteins and metabolites. Broadly speaking, this definition includes related disciplines such as bioinformatics, metabolomics (the study of the metabolite pools of an organism), proteomics (the study of the full or partial set of proteins encoded by a genome) and related areas of research. Surrounding these biological systems, social sciences and humanities research is essential.

² The acronym SSH+ refers to the "social sciences, humanities and related areas of study". It encompasses all disciplines that use analytical, critical, speculative or empirical methods to investigate the human condition, human behaviour and society. The "+" includes disciplines such as environmental and information sciences that might not otherwise be included under SSH. For the purposes of this Request for Applications (RFA), it will be used instead of the term "GE³LS".

Genome Canada also recognizes that applied social sciences and humanities research is necessary if genome sciences are to be translated beyond the lab. In this context they use the term GE³LS research (Genomics and its Environmental, Economic, Ethical, Legal and Social aspects)³.

In recognition of the value of this research and interdisciplinary collaboration, large-scale Genome Canada competitions⁴ require integrated GE³LS research as part of each proposal. These competitions occur periodically (typically every 12-18 months) and each has a specific focus. For example, the upcoming competition in 2018 will focus on the Agrifood sector⁵. These integrated GE³LS projects are necessarily focused on specific questions regarding the uptake or implementation of the particular genomics research project in question.

It is also possible to submit a stand-alone or GE³LS-led large scale project to these competitions if the proposed work aligns with the current theme and is of sufficient scale. For those ready and interested in developing larger-scale projects, please contact Genome BC for further information.

While Genome BC continues to support applicants to Genome Canada, the organization has recognized the need for funding to support smaller scale projects to build local capacity and dialogue in this space.

To cover the range of possible research questions of relevance to Genome BC's 2015-2020 Strategic Plan, this RFA aims to support both projects which explore societal issues and projects which focus on implementation issues.

2. Objectives

The Societal Issues RFA aims to support research on the following:

- Societal concerns and questions raised by applications of genomics; and/or
- The implementation/application of genomics seeking to maximize societal benefits.

Applications should contain original research that is needed to meaningfully address questions related to one or both of these topics.

3. Parameters

- Genome BC has committed an investment of \$250,000 to this initiative;
- Each project can request up to \$50,000 from Genome BC;
- Co-funding (matching funds) is not required for these projects;
- Project terms must be between 6 - 18 months; and
- Researchers may apply individually or as part of a team.

³ The acronym GE³LS should be understood broadly as genomics-related research endeavors and related activities undertaken from the perspective of the social sciences and humanities. It is therefore not strictly limited to the disciplines listed here.

⁴ Large-scale Applied Research Projects have a project budget of at least \$2M and are of 4 years duration. A typical proposal is for between \$5M and \$10M.

⁵ Agrifood sector includes aquaculture

4. Eligibility

In order to be eligible for this program, projects must demonstrate the following:

- Be led by an academic researcher based at one of BC's universities or affiliated hospitals, colleges, the BC Institute of Technology, government facility or other BC-based research institution;
- Be led or co-led by a researcher in an SSH+⁶ discipline;
- Relevance to at least one of the Agrifood and Natural Resources (ANR) sectors (that is: forestry, agrifood, fisheries/aquaculture, energy, mining or environment). The projects funded through the first Societal Issues competition focused on the health sector, so this competition aims to encourage applications and build capacity in the other sectors. Cross-sector submissions are encouraged;
- Address one or both of the objectives of this RFA; and
- Meet the parameters for projects in this program (project term between 6-18 months, Genome BC request no more than \$50,000).

Examples of eligible research could include (but are not limited to) work under the following topics:

- Genomics innovation in the ANR sectors (for example: business models, regulation and governance, intellectual property and law, data management and sharing, trade, competitiveness or similar);
- Public perceptions of genomics in the ANR sectors (for example: awareness, perceived benefits, perceived risk, sources of public perception both cultural and historical, differences and similarities in public value of genomics between sectors);
- Historic and current meanings of the use of the word genomics in relation to the ANR sectors (for example, in policy documents, scientific literature and media);
- Impact of genomics tools/services⁷ on environmental, social and/or economic sustainability (including: distribution of risks and benefits, ecological considerations, food security, land use or energy efficiency considerations); and
- Evaluation of capacity in BC to use new genomic information/tools beyond the health sector. How can genomic information be used in innovative ways for societal benefit?

5. Application Process

There is a two-stage application process for this program:

1. Statement of Interest (SOI) outlining the research question to help assess the eligibility of the proposed project; and,
2. Application providing more details on the research plan with an accompanying budget.

Statements of Interest and applications must be submitted directly to Genome BC through the following email address: societalissues@genomebc.ca.

⁶ See earlier explanation of "SSH+".

⁷ For examples of genomics tools and applications please visit our website at www.genomebc.ca. Sector strategy plans are available for each sector. If you would like further information please contact us.

Statement of Interest

Statement of Interests must provide a brief outline of the proposed project which addresses the eligibility criteria. A SOI template is available on the Genome BC website (www.genomebc.ca) or by contacting Genome BC at societalissues@genomebc.ca.

Statements of Interest will be reviewed by Genome BC to determine eligibility to the RFA. Applicants will be notified within two weeks whether their project is considered eligible and invited to submit an application.

Application

Instructions for submitting applications are available in the *Societal Issues RFA - Application Form*, which will be available on the Genome BC website (www.genomebc.ca) and must be used. Detailed explanations of each application section are included with the form. Applications must address the evaluation criteria described in Appendix 1 of this RFA.

A companion Excel budget must also be provided for the project. The template will also be available on the Genome BC website (www.genomebc.ca). Financial guidelines are described in Appendix 2.

Review Committee

Each application will be sent for external written review by at least two reviewers with expertise relevant to the application. These reviews are considered as input to the Review Panel which will consist of three members of the SSH+ community external to Genome BC. The Review Panel evaluates and ranks the submitted applications. Final funding recommendations will then be made by Genome BC to Genome BC’s Board of Directors for approval.

Following the full decision process, all applicants, whether recommended for funding or not, will be provided with a written evaluation of their application.

6. Timelines

Key dates are listed below. Unless communicated otherwise by Genome BC, submissions must be received by Genome BC by 5pm Pacific Time on the day of the deadline.

Date	Activity
November 2017	Launch of RFA
January 24, 2018	Deadline for submitting Statements of Interest (SOI)
February 8, 2018	Applicants notified of results of their SOI; eligible SOIs invited to submit an application
March 22, 2018	Deadline for submitting applications
May 2018	Review Panel meets
June 2018	Recommendations presented to Genome BC’s Board for approval
June 2018	Applicants notified of results to their application
October 1, 2018	Anticipated start date for successful projects

Fall 2018	Anticipated public announcement of successful projects
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ADMINISTRATION FOLLOWING NOTICE OF RESULTS

The plan for disbursement of approved funds will be determined based on the specific needs of the project. The first disbursement of funds will flow to projects once all conditions for the release of funds have been met as detailed in the Notice of Results.

Funded projects will be required to provide Genome BC with a research and financial report at the end of the project. *Genome BC reserves the right to hold back a portion of funding until the completion of the final report.*

GENOME BRITISH COLUMBIA CONTACT

Interested researchers are encouraged to contact Genome BC at societalissues@genomebc.ca at their earliest opportunity with any questions or for clarification of any aspects of this RFA. Further information is available on the Genome BC website (www.genomebc.ca).

APPENDIX 1. EVALUATION CRITERIA AND GUIDELINES

Evaluation Criteria

To ensure that Genome BC's Societal Issues RFA goals are met, projects will be evaluated on each of the following major criteria, which are regarded as equally important:

- Relevance of research idea to objectives of the RFA;
- Quality of research plan and deliverables;
- Ability of the research team to deliver; and
- Management and financial criteria.

See the application form for a description of the requirements for each section. Reviewers will be asked to interpret the evaluation criteria at a level appropriate to the scale and type of project proposed.

Relevance of Research Idea to Objectives of the RFA

1. Applicants must demonstrate, using specific and clearly defined and quantifiable milestones and objectives, the proposed outcomes to be achieved through the project. Proposals must demonstrate:
 - a. The outcomes from the proposed project (e.g. upon completion and beyond).
 - b. How the project outcomes will address the Societal Issues RFA Objectives.

Quality of the Research Plan and Deliverables

2. Proposals must demonstrate:
 - a. That the proposed objectives, goals, milestones and critical path are feasible and that the available resources are adequate to complete the project on schedule. Milestones must provide objective, quantifiable measures of success and should be realistically attainable during the proposed timeframe.
 - b. That the design, methods and analysis are adequately developed, well integrated, and appropriate to the aims of the project.
 - c. Links to collaborators that are essential to the success of the project (e.g. "lab-based" genome scientists), if applicable.
 - d. The quality and suitability of the research/technical environment in which the work will be done.
 - e. A plan for handling the research data and resources (data protection, release and publication, resource sharing, etc.), if applicable.

Ability of the Research Team to Deliver

3. Applicants must demonstrate that the project leader, co-applicants, and other team members (as applicable) have the ability to accomplish the project objectives:
 - a. Have demonstrated leadership and research excellence, not necessarily related to genomics but in relevant methodologies/scholarship to the type of research being proposed. This could include a description of the training and/or track record of the applicant(s) for the proposed research or the importance and relevance of the past work of the applicant(s).
 - b. Have a serious commitment to the project in terms of dedicated time and the amount of resources applied to it.

Management and Financial Criteria

4. To demonstrate a sound project management plan appropriate to the size of the project, applicants should provide the following:
 - a. The communication plan for dissemination of results, including the way research results will be made accessible, communicated and transferred to project participants, user partners, and the scientific community, without conflicting with data protection (e.g. IP) policies.
 - b. The management and decision making plan for the project, including:
 - A Gantt chart of activities, linked to the proposed budget, with milestones and go/no-go decision points clearly identified;
 - The methods for addressing key challenges, roadblocks, lack of consensus and scientific progress (e.g. adherence to milestones); and
 - The individual ultimately responsible for the decision-making.

5. To demonstrate a sound financial plan, applicants should provide the following: (also see Financial Guidelines in Appendix 2):
 - a. A budget for the project using the template provided by Genome BC. The budget will be assessed on the basis of the following questions:
 - i. Is the project financing plan reasonable and feasible?
 - ii. Do the budgeted costs comply with the Financial Guidelines (Appendix 2)?
 - iii. Are the budgeted costs aligned with the proposed research plan and activities?
 - iv. Is there a clear relationship between the costs and proposed benefits of the project?
 - v. Do the documentation and principal financial assumptions support the proposed budget?

APPENDIX 2. FINANCIAL GUIDELINES

Eligible Costs

Eligible costs are defined as reasonable, new and incremental costs for items that directly support the objectives of the Genome BC approved project. All Genome BC funds must be spent in British Columbia.

Eligible costs may include the following:

1. Salaries:
 - Salaries and benefits for graduate students, post docs, researchers, trainees, technicians. Note that salaries of researchers or senior management who are currently funded by their respective organizations are **not** considered eligible costs; and
 - Payments to persons based outside BC, for example investigators' salaries, are **not** considered eligible costs. However, external costs that are incurred based on a reasonable fee-for-service arrangement or contract are considered eligible.
2. Reasonable and limited operating costs (i.e. day-to-day expenses incurred in conducting the research) such as the cost of conducting surveys or consultations, administrative supplies (e.g. paper, photocopying) and other consumables.
3. Reasonable and low general and administrative (G&A) costs directly linked to undertaking the project. G&A costs must not exceed fifteen percent (15%) of the non-administrative costs of the project budget (calculated as total budget less administrative costs). Examples of G&A costs include:
 - Costs for the project's communications and public outreach activities, including costs associated with ensuring open access to the findings (e.g. costs of publishing in an open access journal or making a journal article open access);
 - Costs related to travel that is not directly related to the research activities (e.g. travel to conferences). Travel for research activities such as sample collection should be listed as consumables under the relevant project activity in the budget; and
 - Costs for attending or participating in conferences.
4. The costs related to services provided by fee-for service providers.
5. Cost of equipment, computer hardware or software, information databases and communications linkages required to complete the project, up to a maximum of \$5,000. Note that equipment under \$2,000 is to be budgeted as a Consumable. The opportunity cost of using existing infrastructure cannot be included as an eligible cost.