

# GeneSolve Program Guidelines

## A. Introduction and Background

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Genome British Columbia (Genome BC) leads genomics innovation on Canada's West Coast and facilitates the adoption and integration of genomics into society. Genomics<sup>1</sup> has revolutionized our understanding about the genetic makeup of life forms on earth and is having significant impact on human health and our natural resources. By supporting genomics research, Genome BC aims to apply the power of genomics to pressing societal and economic challenges. A recognized catalyst for government and industry, Genome BC invests in research to address challenges in BC's Health, Agrifood and Natural Resources sectors. Examples of research projects supported by Genome BC can be found at: <https://www.genomebc.ca/funding/search-projects/>.

Genome BC aims to support the application and translation of genomics research into practical applications that provide innovative and effective solutions to challenges, which may lead to enhanced competitiveness and sustainability across the key sectors. With this vision, Genome BC created GeneSolve, a funding program that co-invests with Sector Partner organizations to apply genomics for solving sector challenges.

## B. Program Objectives

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The overarching objective of GeneSolve is to facilitate adoption of genomics across key BC sectors, such as health, forestry, agriculture & agrifood, fisheries & aquaculture, mining, energy and the environment. The goals of the program are to:

- enable genomics derived and genomics enabled solutions to sector challenges;
- support applied and translational research that can address societal and/or economic challenges in BC and beyond.

Strategically positioned within Genome BC's programmatic offerings to fund genomics research and innovation, it is anticipated that partnerships supported through GeneSolve will lead to opportunities for implementation, translation or commercialization of the project outcomes. GeneSolve projects may lead to follow-on project opportunities funded by Genome Canada, Genome BC or other organizations and agencies.

## C. Eligibility and Role of Applicants

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There are two categories of GeneSolve applicants: **Sector Partners** and **Academic Partners**.

### Sector Partners

A **Sector Partner** is defined as an organization that intends and has the capability to put the resulting project deliverables into use (in internal operations, by commercialization, or otherwise making them available to ultimate users).

Examples of Sector Partners may include: companies, industry consortia, government departments or agencies, or not-for-profits with a credible plan for exploiting project outcomes

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<sup>1</sup>The term genomics is specifically defined here as the comprehensive study, using high throughput cutting edge technologies, of the genetic information of a cell or an organism. This includes the function of specific genes, gene clusters, their interactions with each other or the surrounding environment as well as regulation. For ease of reference, but not limited to, it includes related disciplines such as bioinformatics, epigenomics, metabolomics, metagenomics, proteomics, and transcriptomics.

for the socio-economic benefits of BC, Canada or the world. The Sector Partner can apply from any jurisdiction around the world and does not have to have headquarters or operations in BC as long as benefits to BC are significant and clear.

**To participate in the GeneSolve program, the Sector Partner must:**

1. present a sector challenge, the solution to which would bring socio-economic benefits for the sector and BC and which either: (a) requires genomics or (b) advances the application of genomics;
2. provide a letter of commitment for co-funding and supporting financial documents<sup>2</sup> confirming at least 50% of the funding for the project;
3. accept Genome BC's data sharing and release policy; and
4. accept Genome BC's Intellectual Property policy (see Section D).

### **Academic Partners**

An **Academic Partner** is a person with a faculty appointment/permanent position at an accredited BC institution or affiliated, non-commercial entity (see below). Please note that an Academic Partner cannot be a Sector Partner on the same project or the owner of or employed by a Sector Partner.

**To be eligible for the GeneSolve program, the Academic Partner:**

1. Must be appointed as faculty or hold a permanent position at one of the following types of BC institutions:
  - Post-secondary institutions or their affiliated hospitals or research institutes.
  - Laboratories of federal government departments or agencies.
  - Non-governmental, not-for-profit organizations (including community or charitable organizations) with an explicit research or knowledge translation mandate.
2. Must declare any actual or perceived conflict of interest with the Sector Partner.

Non-tenured faculty/staff may serve as an academic project co-leader, but not as the academic project leader.

## **D. Program Parameters**

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### **GeneSolve projects budget and term:**

- GeneSolve projects must have a minimum total budget of \$100,000.
- Genome BC will award up to a maximum of \$250,000 per project, with at least a minimum 1:1 match from the Sector Partner.
- Project terms can range from six to 24 months.

### **Intellectual Property**

Genome BC does not take an ownership stake in project intellectual property (IP); however, Genome BC expects a return on its investment in projects at affiliated BC research institutions, as defined by agreements between Genome BC and institutional partners.

## **E. How to Participate in GeneSolve**

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Sector and Academic Partners interested in participating in GeneSolve are required to contact Genome BC. The Sector partner can either have a pre-existing partnership or seek Genome BC's help in finding a suitable Academic partner. Genome BC will assign a Sector Manager, who will support the partners through the application process.

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<sup>2</sup> Please see the section A of Appendix 2 of this guideline.

The assigned Sector Manager will initially work with the partners to understand the challenge and the proposed solution. The challenge and the proposed solution will be evaluated using the following criteria:

- 1. Strategic Alignment:**
  - a. How well does the challenge and the potential solution align with Genome BC's strategic goals for the sector?
- 2. Impact:**
  - b. How will the sector benefit by solving the challenge (both directly and indirectly)?
  - c. What is the scope for applying or advancing genomics?
  - d. Would the solution lead to adoption of the innovation in the sector?
  - e. What socio-economic benefits would the solution provide to BC?
- 3. Strengths of Sector Partner Organization:**
  - f. What is the significance of the organization in the sector?
  - g. How does the organization plan to adopt the proposed solution?
  - h. Does the organization have the required (e.g. research, technical, management, financial and leadership) capability to implement the solution to solve the sector challenge?
- 4. Capability of the Academic Partner to Deliver the Solution:**
  - i. Does the proposed Academic Partner have the necessary expertise and experience to successfully provide the solution?
- 5. Financials:**
  - j. Has the Sector Partner secured the funds required to support the project?
  - k. Is the proposed budget adequate to accomplish the proposed solution?
  - l. Does the committed co-funding meet the requirements as per Genome BC's Financial Guidelines in Appendix 2?

## **F. Proposal Process**

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### **Invitation to Submit a Proposal**

Once Genome BC determines that the challenge and the proposed solution meet the above evaluation criteria, the Sector and Academic Partners will be invited to submit the following documents:

- a. Letter of Co-funding Commitment**
- b. Proposal**
- c. Project Budget**

Genome BC will provide the necessary templates for the above documents and may ask for additional supporting documents.

### **Proposal Review**

The proposal will be peer reviewed by subject-matter experts and a review panel with broad expertise in science, technology and the sector(s) to ensure that it is robust, feasible and meets

the Evaluation Criteria in Appendix 1. Genome BC may request further information or changes to the proposal.

### **Funding Decision**

Genome BC expects to notify applicants of results within 3-4 months after the submission of the final proposal.

If the proposal is approved, Genome BC will issue a Notice of Results and initiate the process to launch the project through agreements with the Sector Partner and the Academic Partner to enable the release the funds.

### **G. Administration Following Notice of Results**

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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 research and financial reports annually and at the end of the project. *Genome BC will hold back a portion of funding until the completion of the final report.*

### **H. Genome British Columbia Contacts**

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Further information is available on the Genome BC website:

<https://www.genomebc.ca/genesolve/>

Interested partners are encouraged to contact Genome BC at [genesolve@genomebc.ca](mailto:genesolve@genomebc.ca) for information about the program or developing a challenge.

## **Appendix 1. Evaluation Criteria and Guidelines**

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To meet the objectives of GeneSolve, the following evaluation criteria will be used to evaluate the Proposal.

The following two categories of criteria are regarded as equally important:

### **A. Potential for impact on the sector**

1. Would the project deliverables solve the challenge?
2. Are the deliverables realistic and achievable?
3. Are the proposed economic, social and/or environmental benefits of the research well-described and reasonable?
4. Have the potential users of the project outcomes been identified?

### **B. Research, Management and Financial Feasibility**

#### **Research**

1. Will the genomics or genomics derived approaches solve the challenge?
2. Are the major activities consistent between the research plan, budget and Gantt chart?
3. Does the proposed activities have specific, measurable objectives that will support the project deliverables?
4. Are the proposed objectives, goals, milestones and critical path feasible? Milestones must be constructed as to provide objective performance metrics and should be realistically attainable during the proposed timeframe.
5. Are the available resources, facilities and equipment suitable?
6. Are the design, methods and analysis adequately developed, well integrated, and appropriate to the aims of the project?
7. Does the project include collaborators that are essential to the success of the project?
8. Are the plans for handling the research data and biological resources (data protection, release and publication, resource sharing, etc.) appropriate?
9. Does the team have a risk management plan to mitigate potential risks (e.g., reasonable plan for sample collection or access to ensure the timely completion of the project)?

#### **Management**

10. Are the expertise and time commitment of the research team appropriate for realizing the project goals?
11. Does the project leader(s) have the demonstrated leadership and research expertise/experience?
12. Does the management plan cover project governance, accountabilities of personnel, and processes for decision making on project direction?

#### **Financial**

13. Do the budgeted costs comply with the eligible costs outlined in the Financial Guidelines (Appendix 2)?
14. Do the budgeted costs align with the proposed research plan and activities?
15. Are the financial and budgetary control processes effective?

16. Do the documentation and principal financial assumptions support the proposed budget?
17. Are the costs allocated to Genome BC incurred within BC? Costs incurred utilizing fee-for-service providers located outside of BC might be eligible subject to a quotation and strong justification as BC-based providers must be considered.

## Appendix 2. Financial Guidelines

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### A. Sector Partner funding

1. The Sector Partner must provide at least 50% of the approved funding for eligible project costs.
2. The Sector Partner must match, in cash, at least 50% of the contribution requested from Genome BC.
3. Co-funding must be quantifiable and auditable.

For example, for a project with a total budget of \$600,000 and a requested Genome BC cash contribution of \$250,000, the Sector partner may contribute up to \$350,000 cash with the minimum cash contribution being \$125,000 (which is 50% of the Genome BC ask).

### Eligible Sector Partner Funding

1. For funds to be considered as cash, they must either be provided directly to the Academic Partner's institution or to an external, arms length third party for services that are incurred only for the proposed project. Such third party costs must be: new, fall within the project term, cannot be part of a previous contract, and the results of such third party services must be provided to the Academic Partner for use in the project. A strong justification must be provided to support why such costs cannot be incurred and paid for by the academic institution if being paid directly by the Sector Partner
2. All Sector Partner funds must flow directly to the institution and not through Genome BC.
  - a. It is the project team's responsibility to coordinate flow of partner funds and negotiate any overhead fees with the institution. Supporting documentation for the overhead rate may be requested.
  - b. Overhead fees are to be included in the project budget and can be classified as a consumable under a project management activity.
  - c. Although a portion of the partner funds may be subject to institutional overhead fees, Genome BC will give full credit to the total cash sent to the institution (e.g. if the overhead fee for a \$100,000 cash transfer costs \$10,000, Genome BC will still consider the original \$100,000 as a partner cash contribution).
3. Eligible Sector Partner co-funding expenses may be recognized up to six months prior to Genome BC's Notice of Results subject to eligibility review.
4. All co-funding must be supported by appropriate documentation. This would include:
  - a. Written confirmation (e.g. a letter or a legal agreement) from the co-funding source that commits the funds and provides details of the amount and date of funding, acknowledgement of the use of these funds to co-fund the Genome BC project and acknowledgement of compliance with Genome BC's reporting requirements.
  - b. Co-funding from an industry source, including the Sector Partner:
    - i. For privately held companies, a copy of a Board resolution specifying the company's amount and terms of commitment.
    - ii. For larger companies, a letter from a senior signing authority who is independent to the project, specifying the company's amount and terms of commitment.
    - iii. Documentation provided to support the financial viability of the organization and its ability to fulfill its commitment to the project, including recent financial statements accompanied by other information, such as cash flow projections, audited financial statements, press releases announcing significant new funding, etc.

- c. If applicable, a letter from the institution stating overhead fees relevant to the Sector Partner.
5. In-kind contributions can be as follows:
  - a. Salaries and benefits of individuals that will carry out activities in the project excluding project leaders or co-leaders. These must be at cost with no mark up. Salaries may be for a new hire or the reassignment of an existing employee to work on the proposed GeneSolve project. If the person is being reassigned to the GeneSolve project, the organization would need to confirm in writing that they are re-allocating the individual to the GeneSolve project. The minimum time that an individual can be assigned to the project is 0.15 FTE per annum.
  - b. Consumables which must be accompanied by a clear rationale and calculation of how the value was determined and supported by documentation (e.g. assumptions, price lists, quotes from suppliers, letters supporting same, etc.). While the Sector Partner can contribute more, Genome BC will only match up to 15% of the total in-kind co-funding value for any in-kind consumables co-funding (e.g. if a partner contributes \$200,000 of eligible in-kind co-funding of which \$150,000 are consumables, then GBC will only cash match up to \$30,000 [15% x \$200,000] for the consumables portion of the in-kind co-funding).
  - c. All in-kind expenditures must represent items that would otherwise have to be acquired with cash; however, this excludes the cost of pre-existing facilities or equipment (i.e. budgets cannot include the opportunity cost of space or equipment)
  - d. Note that supplier discounts, including arrangements in which a supplier/purchaser relationship exists, are not acceptable sources of co-funding
  - e. G&A and equipment costs are not acceptable as in-kind co-funding expenditures
  - f. Genome BC may determine that only a portion of proposed in-kind contribution is eligible
6. The value of previously existing IP transferred to a project is not eligible co-funding unless it is a contribution by a supplier of IP (e.g. software license that would otherwise have to be acquired from a third party supplier). Such items must be supported by appropriate documentation from the supplier's head office.

## **B. Eligible costs**

Eligible costs are defined as reasonable and new costs for items that directly support the objectives of the Genome BC approved project. Note that Genome BC funds cannot flow to a company or to a provincial government laboratory unless they are providing the work on a Fee-for-Service basis (see Services from Others).

The main categories of eligible costs are: 1) salaries and benefits, 2) consumables, 3) services from others, 4) general and administrative costs and 5) equipment.

Eligible costs may include the following:

1. Salaries and benefits:
  - a. Salaries for project team members, excluding Project Leader or Co-leaders, must represent at least 0.15 FTE per annum.
  - b. Benefits rate as charged by the host institution, not to exceed 20% of the employee's salary.

- c. Salaries to support administration and coordination of the project, such as a Project Manager, to a maximum of \$10,000 per year (pro-rated for part years) in total costs for projects.
2. Consumables:
- a. Materials and supplies consumed as part of the research, such as laboratory reagents and supplies (e.g. microtitre plates, pipette tips, kits, reagents). For consumables utilized in most laboratories, a general rate per Full Time Equivalent (FTE) may be accepted, provided that the rate is supportable and appropriately justified in the supporting documentation.
  - b. Items that meet at least one of the following; 1) expendable tangible property, 2) useful life of 1 year or less, or 3) a cost of less than \$2,000. For example, a \$1,900 piece of equipment, such as a laptop, would be considered a consumable cost.
  - c. Travel for research activities (e.g. sample collection).
  - d. Equipment service contracts, provided that the need for the use of the equipment is justified.
  - e. Institutional overhead fee applied to the transfer of Sector Partner funds to the academic institution
3. Services from Others:
- a. External costs that are incurred based on a reasonable fee-for-service arrangement or contract.
  - b. Costs related to Intellectual Property protection services such as patent registration, filing, and maintenance costs incurred during the term of the project, as long as the service is provided by a company external to the host institution.
  - c. A copy of a quote or Statement of Work (SOW) must be attached to support any individual cost that exceeds \$15,000. Quotes for services under \$15,000 must be available upon request.
4. General and Administrative (G&A)
- a. Reasonable general and administrative costs directly linked to the project such as: general office expenses, travel costs that are not directly related to the research activities (e.g. travel to conferences and meetings), costs for the project's communications and public outreach activities, and costs associated with scholarly publications, including fees to provide open access to the findings (e.g. costs of publishing in an open access journal or making a journal article open access).
  - b. G&A costs must not exceed five percent (5%) of the non-administrative costs of the project budget (calculated as total budget less administrative costs).
5. Equipment:
- a. Equipment is defined as any item (or collection of interrelated items comprising a system) which is used wholly or in part for the research proposed and meets all three of the following conditions: 1) non-expendable tangible property, 2) having a useful life of more than one (1) year, and 3) a cost of \$2,000 or more.
  - b. A strong justification for the need to purchase equipment for a Genome BC project must be provided.
  - c. Any items of equipment over \$15,000 require a copy of a quote to be attached with the application. Quotes or an equivalent document supporting the price for equipment under \$15,000 must be available upon request.

**Ineligible costs include, but may not be limited to:**

- indirect costs to the project, such as institutional utilities, accounting or administration (note that this is different from the institutional overhead charged by the institution on the transfer of Sector Partner funds)
- the opportunity cost of using existing infrastructure.
- costs related to the preparation and submission of an application for funding from Genome BC or any other funding agency.

Genome BC will conduct a financial due diligence review of each application and its associated budget as part of the review process to assess if costs are eligible and well justified.