

**DRAFT**  
**Summary of key discussion points from Genome Canada's February  
2007 Consultation Workshop**

**March 07, 2007**

On February 26, 2007 Genome Canada hosted a Consultation Workshop in Ottawa, as another step in its on-going engagement regarding GE<sup>3</sup>LS research. Genome Canada's consultation process in this area began in 2002 in order to receive input from a broad range of stakeholders that would assist Genome Canada in fulfilling its objective of the *"assumption of leadership in the area of ethical, environmental, economic, legal, social (GE<sup>3</sup>LS) and other issues related to genomics and proteomics research"*.

As agreed with participants at the workshop, the discussions have been summarized and are hereby circulated to the group for information and comments.

### **Opportunities and Challenges**

Participants in the February 2007 Consultation workshop reaffirmed the opportunities and the challenges identified through previous consultations.

**Opportunities:**

- Novel funding mechanisms that combine to promote innovation and collaboration in GE<sup>3</sup>LS research;
- The integration of GE<sup>3</sup>LS research as embedded within genomics/proteomics research projects;
- Well-established academic research centers and a rich and vibrant research environment;
- Highly-trained prominent GE<sup>3</sup>LS scholars and a rich and diverse pool of "next-generation" GE<sup>3</sup>LS researchers; and
- Internationally renowned academic publications.

**Challenges:**

- Lack of a coordinated national funding strategy for GE<sup>3</sup>LS research that would promote research by optimizing access to a spectrum of funding opportunities;
- Difficulties around the integration of GE<sup>3</sup>LS research into genomics/proteomics research projects, such as crossing disciplinary boundaries, developing best practices, and assessing the outcomes and benefits of integration;
- Absence of mechanisms that would support collaborations and capacity building and enhance the sustainability of career opportunities for the next generation of GE<sup>3</sup>LS researchers;

- Disagreement regarding the scope and meaning of “GE<sup>3</sup>LS” and lack of clarity around the distinction between GE<sup>3</sup>LS and SEBs (Socio-Economic Benefits); and
- Lack of parameters or metrics for measuring outcomes and successes of GE<sup>3</sup>LS research.

## **Objectives**

Participants revised and refined the objectives of a proposed national GE<sup>3</sup>LS strategy:

- 1. Support and promote high-quality, innovative, stand-alone and integrated GE<sup>3</sup>LS research.**
- 2. Enhance the appropriate integration of GE<sup>3</sup>LS research in genomics / proteomics research.**

Discussion of this objective focused on how to achieve successful integration. Participants discussed whether integrated GE<sup>3</sup>LS components should always be required, or rather be included only when identified as relevant. They also discussed the need to identify research areas in which fewer larger GE<sup>3</sup>LS research projects would be more effective than many small integrated projects.

Another focus of the discussion was the appropriate relationship between GE<sup>3</sup>LS researchers and genomics/proteomics researchers. For example, challenges created by disciplinary and cultural differences; the importance of engaging GE<sup>3</sup>LS researchers early on and including them in the research team from the outset; the need to identify an appropriate balance between GE<sup>3</sup>LS and genomics/proteomics researchers in determining the direction of the GE<sup>3</sup>LS research project; and the need for GE<sup>3</sup>LS researchers to remain at arms-length in order to maintain a critical stance toward the science project when necessary.

Finally, the importance of having an appropriate review process was discussed. Participants stressed the need to ensure that GE<sup>3</sup>LS components are reviewed properly. Participants noted that situations where the GE<sup>3</sup>LS component of a funded project was not strong created the impression that integration is a funding requirement rather than a genuine research goal.

- 3. Stimulate GE<sup>3</sup>LS culture and support the GE<sup>3</sup>LS community in order to foster relevance and excellence.**

Participants discussed the issues of: whether or not there is a “GE<sup>3</sup>LS culture”; the need to promote collaboration between GE<sup>3</sup>LS researchers; the need to build capacity and expand the pool of researchers; the challenge created by the fact that not all researchers who undertake GE<sup>3</sup>LS research identify themselves as GE<sup>3</sup>LS researchers;

and the need to increase sustainability of careers in GE<sup>3</sup>LS, not only in academia but also in industry and government (policy).

#### **4. Develop parameters and metrics for evaluating GE<sup>3</sup>LS research outcomes.**

Discussion of this objective focused on the importance of identifying appropriate metrics for evaluating GE<sup>3</sup>LS research, considering that some may be distinct from those used for evaluating genomics/proteomics research. Another focus of the discussion was the difficulties inherent in evaluating GE<sup>3</sup>LS research considering the indirect and complex nature of its impacts on the scientific community, the policy and regulatory communities, and the public.

Participants stressed that there are currently no standard metrics or parameters for evaluating the unique advantages and contributions of large-scale stand-alone GE<sup>3</sup>LS research projects, or those of integrated GE<sup>3</sup>LS components in genomics/proteomics research projects. It was emphasized that the benefits of integration as well as those of large-scale projects, should be clearly identified, quantified, and communicated.

#### **5. Encourage GE<sup>3</sup>LS knowledge translation and mobilization.**

Under this objective participants had an extensive discussion on the issue of public engagement, which is an important responsibility of GE<sup>3</sup>LS researchers and genomics/proteomics researchers. It was emphasized that GE<sup>3</sup>LS research in Canada lacks developed capacity to translate and mobilize research results to stakeholders, including policymakers and the public.

Public engagement activities were described as particularly challenging because there is some disagreement regarding their goal (are the events meant to “find out what the public wants” or to “tell the public what it should know”). Furthermore, there is a need to maintain the distinction between public engagement activities as components of communications services, and *research on* public engagement. Finally, other challenges were mentioned such as the mechanisms for public engagement being expensive and the lack of established metrics for measuring the success of public engagement in the area of GE<sup>3</sup>LS.

#### **6. Explore appropriate mechanisms to assess the societal impact of the GE<sup>3</sup>LS and genomics/proteomics research.**

The discussion on the societal impact of genomics / proteomics research originated from the lack of clarity regarding the difference between GE<sup>3</sup>LS and SEBs (Socio-Economic Benefits). Since Genome Canada has requirements that both the GE<sup>3</sup>LS aspects of genomics/proteomics research and its socio-economic benefits be addressed, there is a need in the research community for clarifications regarding the

operational guidelines for addressing these concepts in future research proposals. Participants pointed out that the term '*benefits*' is not neutral and therefore introduces a bias.

The discussion led to the suggestion to replace the problematic phrase "*socio-economic benefits*" with the more neutral and general phrase "*societal impact*" and further exposed the complexities of this issue, showing that these distinctions require further clarification. In addition, participants emphasized the importance of exploring the societal impact of GE<sup>3</sup>LS research itself, since misguided GE<sup>3</sup>LS research can lead to unwise policy and legislation, misguided public discourse, or even exacerbated public fear.

## Potentially Effective Mechanisms

Discussions focused on a number of mechanisms that may be effective in achieving the identified objectives.

### 1. An Annual International GE<sup>3</sup>LS Symposium

- To facilitate networking and promote collaborations between GE<sup>3</sup>LS researchers within Canada and internationally;
- To create a meeting place for senior and emerging Canadian GE<sup>3</sup>LS researchers and GE<sup>3</sup>LS researchers;
- To facilitate interactions between groups who run the large-scale GE<sup>3</sup>LS projects;
- To facilitate interactions between GE<sup>3</sup>LS researchers and genomics / proteomics researchers; and
- To showcase successful integration of GE<sup>3</sup>LS within science projects.

### 2. Full time GE<sup>3</sup>LS staff at the national level, regional staff that would focus on GE<sup>3</sup>LS support at the Genome Centre level, and continued support of the "GE<sup>3</sup>LS 7 network"

- As the bar for competitions is rising, having more support for GE<sup>3</sup>LS research at the national and the regional level was identified as important;
- At the national level, a GE<sup>3</sup>LS staff person would liaise with GE<sup>3</sup>LS staff at the Genome Centres, liaise with funding agencies and other stakeholders, serve as the contact point for international collaborations pertaining to GE<sup>3</sup>LS research, and participate in the organization of the Annual International GE<sup>3</sup>LS Symposium and other national/international workshops, meetings and events;
- At the regional level, GE<sup>3</sup>LS staff at the Genome Centres would be members of the GE<sup>3</sup>LS 7 Network and would collaborate across Centres to promote resource sharing and capacity building nationally, explore opportunities for capacity building within the Centre and the region, serve as the contact points for Genome Canada's National GE<sup>3</sup>LS Program, assist genomics/proteomics research

projects in identifying relevant GE<sup>3</sup>LS components and appropriate GE<sup>3</sup>LS research partners, and organize local workshops and GE<sup>3</sup>LS outreach events.

### **3. A GE<sup>3</sup>LS website**

- Facilitate communication within the research community by posting information about conferences, workshops, publications, resources, funding opportunities in Canada and internationally;
- Establish a database of Canadian GE<sup>3</sup>LS researchers;
- Establish a GE<sup>3</sup>LS “dating base” to facilitate partnerships among GE<sup>3</sup>LS researchers and between them and genomics/proteomics researchers;
- Allow postings of requests for partnerships on specific projects;
- Facilitate communication with the public, for example, by posting references to texts that are at the appropriate level (related to public engagement);
- Include interactive features such as online courses;
- Be maintained in collaboration with others (e.g., other funding agencies)
- Allow data mining.

### **4. Workshops on integration**

- Bring together experienced GE<sup>3</sup>LS researchers and genomics/proteomics researchers for shared learning about how to navigate across disciplinary and cultural boundaries;
- Inform GE<sup>3</sup>LS and genomics/proteomics researchers about each other’s domains;
- Raise the GE<sup>3</sup>LS awareness of genomics/proteomics scientists to empower them and enable them to anticipate the issues that their projects may raise; and
- Create “compendium on successful integration” by studying successful and unsuccessful past experiences.

### **5. Workshops on specific themes**

- Organized workshops around emerging research themes and policy matters;
- Workshops would create opportunities for disciplinary and interdisciplinary collaborations;
- Bring together well-established GE<sup>3</sup>LS researchers and students in various stages of their training, to enhance training and learning opportunities and support career development; and
- Bring together GE<sup>3</sup>LS and genomics/proteomics researchers to engage in shared learning, to create networking opportunities, and to promote dialogue and future collaborations.

## **6. Collaboration between funding agencies and with federal departments**

- Establish collaboration between funding agencies to enhance the accessibility of funding and ensure that appropriate funding mechanisms are in place to fund a broad range of GE<sup>3</sup>LS research projects;
- Collaborate with other funding agencies on joint initiatives, encouraging the exchange of information between program staff responsible for GE<sup>3</sup>LS-eligible funding programs, and cross-promoting GE<sup>3</sup>LS-eligible funding programs on agencies' web sites and on the future GE<sup>3</sup>LS website.
- Inform Canadian researchers about international funding opportunities;
- Participants stressed the fact that important research may not be undertaken as it "falls through the cracks of current funding mechanisms".

## **7. Developing metrics for measuring the outcomes of GE<sup>3</sup>LS research (e.g., translation and mobilization)**

- Requiring metrics for measuring the outcomes of specific projects from researchers as an integral part of their proposals;
- Creating a "typology of metrics for GE<sup>3</sup>LS research" by surveying past projects that have been funded by different funding agencies and are considered to be successful;
- Creating small groups of GE<sup>3</sup>LS researchers to work on defining metrics;
- Remembering that some metrics are not about social forecasting or benefits, but rather of a broader and more theoretical nature; and
- Incorporating metrics into the peer review process.

## **8. Investing in public engagement**

- Engaging journalists and investing in media training;
- Sending community newsletters;
- Using movies, plays and science-café's;
- Creating a "Compendium of approaches to public engagement" as a resource;
- Distributing the GE<sup>3</sup>LS newsletter more widely.

## **9. Strengthening GE<sup>3</sup>LS Expertise**

- Fund travel to conferences and workshops for researchers and students;
- Fund "moving researchers around" and "getting them out of silos";
- Provide mentorship compensation to senior researchers for training the next generation;
- Provide opportunities for researchers on sabbatical to become involved in integrated projects;
- Survey academics who teach courses that are related to GE<sup>3</sup>LS, such as courses in the area of Science, Technology and Society, in order to help define the GE<sup>3</sup>LS community, expand the pool of researchers and stimulate GE<sup>3</sup>LS culture.

## **Mechanisms that were not supported at this time**

Participants also identified mechanisms that – in their opinion – may *not* be effective at this time:

### **A Canadian Academic GE<sup>3</sup>LS Society**

- The GE<sup>3</sup>LS research community is not ready for this;
- It might entrench even further the separation of researchers from their disciplinary roots, which is already a challenge for researchers working in an academic environment that is based on traditional disciplinary boundaries.

### **A peer-reviewed GE<sup>3</sup>LS journal**

- Participants considered that this was ill advised at this point because it might strengthen the impression that GE<sup>3</sup>LS researchers are unable to publish their work in established scientific journals or in established humanities and social science journals.

### **A national steering committee**

- Discussions of the proposed mechanism of a GE<sup>3</sup>LS Steering Committee highlighted the various ways in which such an entity might operate and the different roles and mandates it might have.
- The concept of such a GE<sup>3</sup>LS Steering Committee was not rejected by workshop participants. Rather, it was suggested that in order to move forward with its implementation further work is required to clarify the composition, terms of reference, mandate and governance of such a committee.