

Corporate Plan 2010–11



GenomeCanada

2000–2010

A celebration of achievement and discovery.



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Corporate Plan 2010–11

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SECTION I – About Genome Canada

Genome Canada is a not-for-profit corporation, established in February 2000 under the Canada Corporations Act Part II. Its office is located in Ottawa, Ontario. Genome Canada's relationship to its lead investor, the federal government, is formalized through a funding agreement with Industry Canada, with accountability established through the annual submission of a corporate plan and an annual report.

Genome Canada's mandate is to develop and implement a national strategy in genomics¹ research for the benefit of all Canadians in sectors of strategic importance to Canada—health, agriculture, environment, forestry, and fisheries. Through its activities and programs and through its coordination and collaborations with federal departments and agencies, Genome Canada has played, and will continue to play, a role in the development of Canada's knowledge advantage, its people advantage and its entrepreneurial advantage, three key elements of the Government of Canada's Science and Technology Strategy. Furthermore, it will continue to play a leadership role in addressing the ethical, environmental, economic, legal and social (GE³LS) implications of genomics research, and is committed to communicating with Canadians on these and other issues.

Genome Canada's *modus operandi* is based on the premise of funding and managing large-scale and interdisciplinary, internationally peer-reviewed research projects and Science and Technology (S&T) Innovation Centres (previously called Science and Technology Platforms). This is achieved by working in close collaboration with its primary partners—the six Genome Centres, located in British Columbia, Alberta, the Prairies, Ontario, Quebec, and the Atlantic. The relationship established between Genome Canada and each of the Genome Centres is defined by means of a funding agreement that not only acknowledges the independence of each Genome Centre, but also specifies the necessary parameters for each Centre to operate within, and contribute to Genome Canada's overall mandate. These not-for-profit organizations are critical for fostering regional expertise in genomics research, developing provincial partnerships to strengthen regional leadership and competitiveness, facilitating access to the S&T Innovation Centres, creating unique and innovative public outreach programs, as well as assisting in attracting co-funding for projects from both domestic and international investors.

Science and Technology Innovation Centres



¹ Genomics means the study of genes and their functions, namely genomics, proteomics, metabolomics, bioinformatics and other related fields of research.

SECTION I – About Genome Canada

Genome Canada actively seeks to bring together investors from all sectors, including provincial governments and agencies, international non-governmental organizations and research institutes, industry, universities, and research hospitals in support of large-scale projects of strategic scientific and international importance to Canada. To date, Genome Canada has raised \$919 million in co-funding to supplement the \$840 million invested by the Government of Canada over the past decade, resulting in more than \$1.7 billion of total funding to support 140 innovative, large-scale research projects and Science and Technology (S&T) Innovation Centres.

Table I

Genome Canada Portfolio (2000-2009)							
SECTORS	B.C	Alberta	Prairie	Ontario	Quebec	Atlantic	TOTAL
Agriculture	4	2	4	2	1	1	14
Environment	2	1	1	3	2	1	10
Fisheries	2					2	4
Forestry	2			1	2	1	6
GE ³ LS	2	1	2	3	2		10
Health	18	2	2	22	22	2	68
Technology Development	3	1	2	10	2		18
S&T Innovation Centres	4	1	1	2	1	1	10
TOTAL	37	8	12	43	32	8	140

Table 1 shows the distribution of projects and S&T Innovation Centres across sectors and regions. They are the tangible outcomes arising from the administration of seven competitions and various reviews managed by Genome Canada since its inception in 2000. Outcomes of Genome Canada's most recent competitions included twelve projects funded in the Applied Genomics Research in Bioproducts or Crops competition, for a total Genome Canada investment of about \$50 million; and thirteen projects funded in the Technology Development competition for a total Genome Canada investment of \$9.5 million. All of Genome Canada's competitions have supported excellent genomics research projects, which has not only illustrated the enormous potential that exists in Canada to undertake innovative and cutting-edge research in genomics, but also has resulted in outcomes with demonstrable impacts and benefits.

Over the past decade, Genome Canada has supported and nurtured the growth of a new generation of researchers, who are accustomed to working in well-integrated, interdisciplinary teams across geographic boundaries. They have developed the sophisticated management skills needed to ensure success of large, complex projects on an international scale, and have the necessary skills to attract co-funding to supplement federal investments. They are well-supported by access to leading-edge technologies, expertise and infrastructure that has enabled their major discoveries and innovations to date. In short, they are the "prepared minds" underpinning Canada's future success in genomics research.

Over its relatively short history, Genome Canada has played a significant role establishing Canada as a recognized world leader in promoting research on the ethical, environmental, economic, legal and social implications of genomics (GE³LS). The unique approach adopted by Genome Canada to ensure the integration of GE³LS-related disciplines into genomics research, as well as to fund large-scale GE³LS research projects, has helped enable responsible and beneficial applications of genomics science by anticipating and addressing up front, the legitimate concerns, needs and values of society.

Genome Canada is recognized as a major player in the international genomics arena. By funding internationally competitive research through bilateral and multilateral collaborations—the Cancer Stem Cell, the Structural Genomics, the International Knockout Mouse and the International Barcode of Life consortia, Genome Canada is contributing expertise and leadership in international genomics research priorities.

Governance

Genome Canada operates within a governance framework that is reflective of its not-for-profit corporation status. It applies modern governance practices to ensure effective oversight of the corporation. Its governance framework is defined by the corporation’s letters patent, general bylaws, funding agreements with Industry Canada, corporate policies, and strategic plans.

Genome Canada is governed by a Board of Directors comprising up to 16 individuals drawn from the highest levels of academic, private and public sector communities. The Presidents of five major federal research agencies—the Canada Foundation for Innovation, Canadian Institutes of Health Research, National Research Council, Natural Sciences and Engineering Research Council, and Social Sciences and Humanities Research Council—are non-voting, *ex-officio* advisors to the Board of Directors.

The Board of Directors has overall responsibility for the stewardship of the business and affairs of Genome Canada, establishing a number of committees to help it discharge its duties, including an Executive Committee, Audit Committee, Investment Committee, Election Committee, Corporate Governance Committee and Compensation Committee.

The Board of Directors has also established a Science and Industry Advisory Committee (SIAC) with the expertise required to provide strategic and visionary advice and expertise on an integrated strategy for research and development in the areas of genomics and proteomics in Canada.

GENOME CANADA GOVERNANCE STRUCTURE



About this document

Genome Canada's Corporate Plan 2010–11 reports on activities and performance for the fiscal year 2009–10 and outlines anticipated plans and activities for 2010–11.

The reporting of plans and activities in this corporate plan is organized around Genome Canada's five objectives²:

1. the development and establishment of a coordinated strategy for genomics research to enable Canada to become a world leader in areas such as health, agriculture, environment, forestry and fisheries;
2. the provision of leading-edge technology to researchers in all genomics-related fields through regional Genome Centres across Canada, of which there are currently six, one each in British Columbia, Alberta, the Prairies, Ontario, Quebec, and the Atlantic;
3. the support of large-scale projects of strategic importance to Canada by bringing together industry, government, universities, research hospitals and the public;
4. the assumption of leadership in the area of ethical, environmental, economic, legal, social and other issues related to genomics research (GE³LS), and the communication of the relative risks, rewards and successes of genomics to the Canadian public; and
5. the encouragement of investment by others in the field of genomics research.

² Genome Canada's Funding Agreement signed March 31, 2008

SECTION II – Pursuing our Objectives: Performance for 2009–10

Since its creation in 2000, Genome Canada has been committed to encouraging, developing, facilitating and financing the expansion in Canada of genomics research capacity and to affirming Canada's stature on the world's genomics research stage. This section outlines Genome Canada's major activities and accomplishments for 2009–10 in fulfillment of its mandate and objectives.

OBJECTIVE 1

The development and establishment of a coordinated strategy for genomics research to enable Canada to become a world leader in areas such as health, agriculture, environment, forestry and fisheries.

Strategy

Genome Canada's approach for developing and establishing a coordinated strategy for genomics research to become a world leader in sectors of strategic importance to Canada (i.e., health, agriculture, environment, forestry, fisheries, new technologies and GE³LS) is to actively engage in genomics initiatives with relevant Canadian and international groups who have common interests and goals. The approach is undertaken in two phases: 1) a developmental phase in which opportunities for Genome Canada involvement are explored via participation and engagement in workshops, conferences, strategic priority initiatives, and 2) a funding phase in which opportunities, e.g., international consortium initiatives, have been assessed and determined to be excellent investments for Genome Canada. This approach actively engages the organization's Science and Industry Advisory Committee for advice on strategic prioritization and environmental scanning; the six Genome Centres for assistance in regional and national consultations; and relevant provincial, federal and international funding agencies for partnership and collaboration in new research opportunities.

What has been achieved?

In 2009-10, Genome Canada continued its involvement in the following initiatives in which it currently has a significant funding investment:

■ **Cancer Stem Cell Consortium (CSCC)**—The CSCC was established in 2007, following extensive consultations as part of the Canada–California Strategic Innovation Partnership (CCSIP). Members of the consortium include the Canadian Institutes of Health Research, the National Research Council of Canada, the Michael Smith Foundation for Health Research, the Canada Foundation for Innovation, the Stem Cell Network, the Ontario Institute for Cancer Research, and Genome Canada. The objective of the CSCC, which is governed by a Board of Directors, is to coordinate an international strategy for cancer stem cell research and related translational activities. Cancer stem cells (CSC) are considered to be the major culprits at the root of many cancers, accounting for tumor growth and metastases, and their eradication will potentially offer enduring cancer cures.

In February 2009, a joint call for applications was issued by the CSCC and the California Institute for Regenerative Medicine (CIRM) to support Disease Teams of Canadian and Californian scientists focusing on cancer stem cell research with the goal being an Investigational New Drug (IND) filing at the end of the four-year grant to enable Phase I clinical testing.

Two applications led jointly by a Canadian and Californian scientist were funded through the program. The Canadian leads on the two projects are Dr. Tak Mak, Princess Margaret Hospital, University Health Network and Dr. John Dick, University Health Network. At its meeting of October 8, 2009, the Board of Directors of Genome Canada approved funding, up to a maximum of \$14M of Genome Canada's \$25M allocated to the CSCC, to support the genomics research to be undertaken by the Canadian scientists in each of the "Disease Team projects." The Canadian Institutes of Health Research will provide the remaining funding to the Canadian teams, while CIRM will support the Californian partners.

SECTION II – Pursuing our Objectives: Performance for 2009–10

■ **Structural Genomics Consortium (SGC)**—The SGC is a not-for-profit international consortium, governed by a Board of Directors, made up of representatives from each of the funders—the Wellcome Trust, the Canadian Institutes of Health Research, Genome Canada, the Canada Foundation for Innovation, the Ontario Ministry of Research and Innovation, Swedish funding agencies, Glaxo, Novartis and Merck. Its mandate is to determine the three-dimensional structures of proteins of medical relevance (for example, proteins from the parasite that causes malaria) and place them in the public domain without restriction. The availability of these protein structures greatly facilitates the development of new drugs.

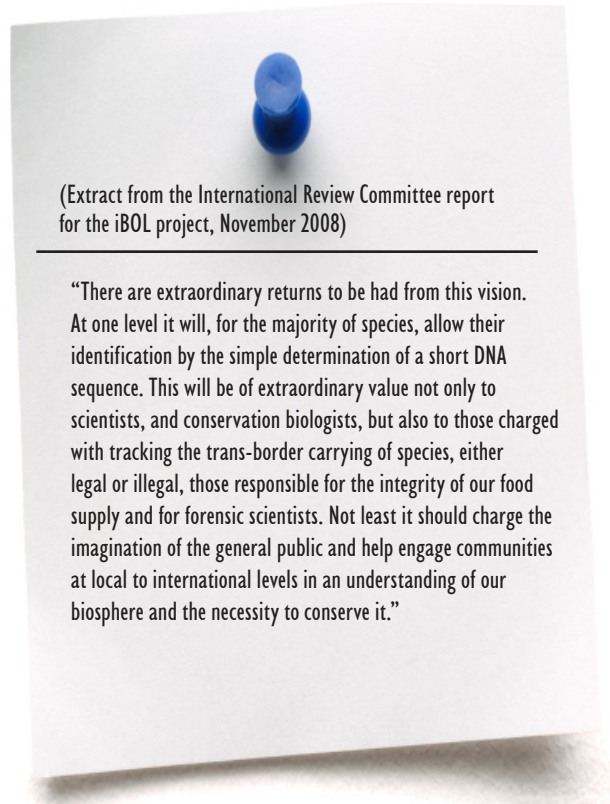
In 2009–10, Genome Canada continued its oversight activities to ensure that target milestones for the determination of three-dimensional protein structures were on track. Phase II funding of the SGC will end in June 2011.

■ **The International Barcode of Life (iBOL)**—The iBOL is a not-for-profit international consortium that will use a short sequence of DNA (referred to as a “DNA barcode”) to initiate a worldwide species identification effort, which will catalogue over 500,000 species of socio-economic importance within six years. The iBOL Consortium builds on the technical accomplishments of the Canadian Barcode of Life Network funded by Genome Canada and partners under the aegis of Competition III.

In 2009-10, Genome Canada carried out oversight activities, including membership on the iBOL Board of Directors, to ensure that target milestones were being met.

■ **Public Population Project in Genomics (P³G)**—The P³G is a not-for-profit international consortium with the aim of fostering collaboration between researchers and projects in the field of population genomics (biobanking). The goal of P³G is to facilitate the harmonization of samples and data collected from different international biobanks. This harmonization will provide the large sample numbers needed for studies of genetic and environmental contributions to health and disease and will generate new knowledge to improve public health and well-being. A key component of the P³G is the CARTaGENE biobank, a population- based cohort and founding member of P³G that aims to collect socio-demographic and health assessment data, and biological material and DNA samples from 50,000 Quebec citizens aged 40–69.

The end date of Genome Canada’s funding support to P³G is March 31, 2010. To ensure maximum benefit is gained, and taking into consideration the scope and nature of the consortium, P³G has been offered the opportunity to apply for a no-cost extension for up to one year (i.e., to March 31, 2011).



(Extract from the International Review Committee report for the iBOL project, November 2008)

“There are extraordinary returns to be had from this vision. At one level it will, for the majority of species, allow their identification by the simple determination of a short DNA sequence. This will be of extraordinary value not only to scientists, and conservation biologists, but also to those charged with tracking the trans-border carrying of species, either legal or illegal, those responsible for the integrity of our food supply and for forensic scientists. Not least it should charge the imagination of the general public and help engage communities at local to international levels in an understanding of our biosphere and the necessity to conserve it.”

■ **International Knockout Mouse Consortium (IKMC)**—The Genome Canada-funded North American Conditional Mouse Mutagenesis Project, along with the European Conditional Mouse Mutagenesis Program funded by the European Commission, and the American-led Knockout Mouse Project funded by the National Human Genome Research Institute, and the Texas Institute of Genomic Medicine are the three large-scale international projects in mouse mutagenesis that constitute the IKMC. Studying mice with specific genes “knocked out” will provide insight into human biology and disease. The consortium serves as a vehicle for coordinating international collaboration in the area of mouse mutagenesis. Genome Canada is a member of the consortium’s steering committee.

■ **International Regulome Consortium (IRC)**—The IRC is a not-for-profit international consortium with the overarching goal of exploring how gene function is regulated in mammalian cells during development, with implications for stem cell research and regenerative medicine. Employing proteomics and genomics tools and using the mouse as the primary model, the consortium’s objectives are to identify interacting proteins and target genes for 570 transcription factors in different tissues and stages of development.

An interim review of the IRC was undertaken in January 2009 to assess progress against scientific and GE³LS milestones and deliverables. At its March 2009 meeting, the Board of Directors of Genome Canada determined, based on observations from the interim review, that the number of scientific and management issues related to the Canadian component of the IRC would not allow the consortium to remain on track to achieve its objectives to a satisfactory level and thus maintain leadership in this field. Genome Canada’s funding support for the IRC ended June 30, 2009.

In 2009-10, Genome Canada continued its environmental scanning of opportunities for Canadian involvement in large-scale genomics initiatives by participating in the development phases of the following initiatives:

■ **International Cancer Genome Consortium (ICGC)**—The ICGC was formally launched in April 2008 with a mandate to produce an atlas of (somatic) genome abnormalities in cancer. Countries involved in the ICGC include Australia, Canada, China, France, India, Japan, Singapore, Spain, the United Kingdom, and the United States. Genome Canada has played an active role in the development of the consortium through both the Executive and Science Planning Committees, and currently has observer status on the Executive Committee.

■ **Canadian Cancer Research Alliance (CCRA)**—The CCRA serves as the pan-Canadian coordinating voice for cancer research, meeting the research needs of The Canadian Partnership Against Cancer. Genome Canada is a member agency, has a representative on the Board of Directors of the CCRA and is an active contributor to the development of the CCRA’s new research strategy.

■ **International Funders’ Forum (IFF)**—The mandate of the Genome Canada-led IFF is to increase awareness and communication among funding agencies from around the world, who invest in large-scale international genomics projects, to discuss issues around the funding of these projects, and to identify opportunities for future collaboration.

In May 2009, led by Genome Canada, a number of IFF members sponsored a meeting in Toronto to revisit the data release principles of community resource projects. A *Nature* publication summarizing the workshop discussions and recommendations was published on September 10, 2009. An IFF meeting on data release was held on November 17th in Toronto. The outcomes of the meeting included a recommendation to implement a system of statements of intent to be published or deposited by researchers in appropriate repositories (e.g., *Nature Precedings*) no later than the initial release of their research data.

What are the benefits?

As a result of its ongoing collaborative work throughout 2009–2010, Genome Canada’s partnership with relevant national and international stakeholders has strengthened a coordinated, pan-Canadian approach to strategic investments in genomics research that is responsive to national projects.

Furthermore, it has provided opportunities to establish Canadian leadership of, or participation in, international research initiatives in areas that address unique scientific questions of importance to Canada; facilitated international collaboration through dialogue with other funders; and fostered an environment that is conducive to international collaboration through the development of policies, guidelines and the promotion of best practices.

OBJECTIVE 2

The provision of leading-edge technology to researchers in all genomics-related fields through regional Genome Centres across Canada, of which there are currently six, one each in British Columbia, Alberta, the Prairies, Ontario, Quebec and the Atlantic.

Strategy

Genome Canada’s approach to provide leading-edge technology to researchers in all genomics-related fields is to establish an effective symbiotic relationship with its primary partners, the six Genome Centres, to facilitate access to Genome Canada fully-funded S&T Innovation Centres for researchers in all genomics-related areas.

What has been achieved?

■ **S&T Innovation Centres**—Genome Canada provides state-of-the-art technologies, expertise and infrastructure to Genome Canada-funded researchers and over 1,500 others from academia and industry, across Canada and internationally, through its support of six Science and Technology Innovation Centres (previously called Science and Technology Platforms) across Canada. These Centres provide the entire spectrum of genomics technologies, including DNA sequencing, genotyping, RNA expression, protein identification and quantification (proteomics), metabolomics and the most advanced bioinformatics analyses to manage the vast quantities of complex data produced.

The leaders and staff of the six S&T Innovation Centres and other expert representatives meet annually to share details of advances in technologies arising from the ongoing work undertaken at the Innovation Centres, discuss methodologies to improve cross-platform communications, and share best methods and practices in delivering high-quality technology services. The most recent workshop was held January 25–26, 2010 in Toronto, Ontario.



■ **Technology Development Competition**—Excellent genomics research projects and companies are highly dependent on rapidly evolving technologies as a prerequisite for success. Along with the funding support of the S&T Innovation Centres, Genome Canada encourages research in new technology development through the funding of technology development projects selected through a competitive process.

A Technology Development Competition was launched in April 2007. The intent of this competition was to solicit proposals that deal with various aspects of technology development, such as incremental improvements to existing processes, new techniques for the latest generation of genomics and proteomics instrumentation, new software for analyzing large datasets, entirely new technologies, and in-lab devices to improve production of large-scale data. The recommendations of the International Scientific Review Committee resulted in Genome Canada investing \$9.5M in 13 projects over a two year period. All projects are monitored through the review of quarterly reports submitted through the Genome Centres. In August 2009, projects were given the opportunity to apply for no-cost extensions if the additional time was required to complete milestones. To date, four projects have been granted a no-cost extensions until July 2010.

What are the benefits?

As a result of the ongoing funding support throughout 2009–2010 of the S&T Innovation Centres, Genome Canada’s investments are providing access to leading-edge technology and expertise which allows Canadian genomics researchers to design appropriate experimental protocols, receive high-quality, high-throughput genomics data at a competitive price as well as access to data analysis expertise. Furthermore, the expected research outputs of the technology development competition will broaden and update, in a rapid and timely fashion, the menu of technologies available to the entire Canadian scientific community and the S&T Innovation Centres across Canada.

SECTION II – Pursuing our Objectives: Performance for 2009–10

User Statistics for Science and Technology Innovation Centres

(as at October 2009)

		# of Users	% of Activity
The Microarray Facility at the Prostate Centre (Vancouver General Hospital) <ul style="list-style-type: none"> • Development, Production, Hybridization and Analysis of Microarrays • Bioinformatics 	GC Project	2	17
	Non-GC Academic	36	70
	Canadian Industry	1	13
	International	-	-
	Total	39	100
BC Cancer Agency Genome Sciences Centre <ul style="list-style-type: none"> • Sequencing • Mapping • Bioinformatics 	GC Project	10	45
	Non-GC Academic	72	46
	Canadian Industry	-	-
	International	26	9
	Total	108	100
University of Victoria/Genome BC Proteomics Centre <ul style="list-style-type: none"> • Proteomics • Microarray Analysis • Protein Identification & Characterization • Metabolomics 	GC Project	1	15
	Non-GC Academic	54	37
	Canadian Industry	3	9
	International	13	39
	Total	71	100
The Centre for Applied Genomics (Toronto) <ul style="list-style-type: none"> • DNA Sequencing and Synthesis • Microarray Analysis and Gene Expression • Cytogenomics and Genome Resources • Genetic Analysis • Statistical Analysis • Biobanking and Tissue Culture • Genotyping 	GC Project	23	28
	Non-GC Project	573	57
	Canadian Industry	11	1
	International	47	14
	Total	654	100
McGill University and Genome Quebec Innovation Centre <ul style="list-style-type: none"> • Genotyping • Functional Genomics • Proteomics • Sequencing • Bioinformatics 	GC Project	6	21
	Non-GC Academic	628	62
	Canadian Industry	10	10
	International	28	7
	Total	672	100
The Integrated and Distributed Bioinformatics Platform (Calgary) <ul style="list-style-type: none"> • Custom Programming • Database Maintenance • Website fixes and updates • Web server provision • Training 	GC Project requests	14	25
	Non-GC Academic	24	44
	Canadian Industry	2	4
	International	15	27
	Total	55	100
Totals (not including Bioinformatics Platform)	GC Projects	42	
	Non-GC Academic	1,363	
	Canadian Industry	25	
	International	114	
	Grand Total	1,544	

Statistics are for the period October 1, 2008 to September 30, 2009.

OBJECTIVE 3

The support of large-scale projects of strategic importance to Canada, by bringing together industry, government, universities, research hospitals and the public.

Strategy

Genome Canada's approach to ensure that large-scale genomics research projects of the highest calibre are funded is to issue calls for proposals in sectors of strategic importance to Canada—health, agriculture, environment, forestry, and fisheries. Projects are selected for funding through a rigorous scientific peer-review process involving international experts, as well as a due diligence process that examines the excellence of the proposals' financial and management elements. Central to Genome Canada's strategy is ensuring that the GE³LS implications and potential socio-economic benefits related to genomics research are addressed as an integrated component of each proposal.

What has been achieved?

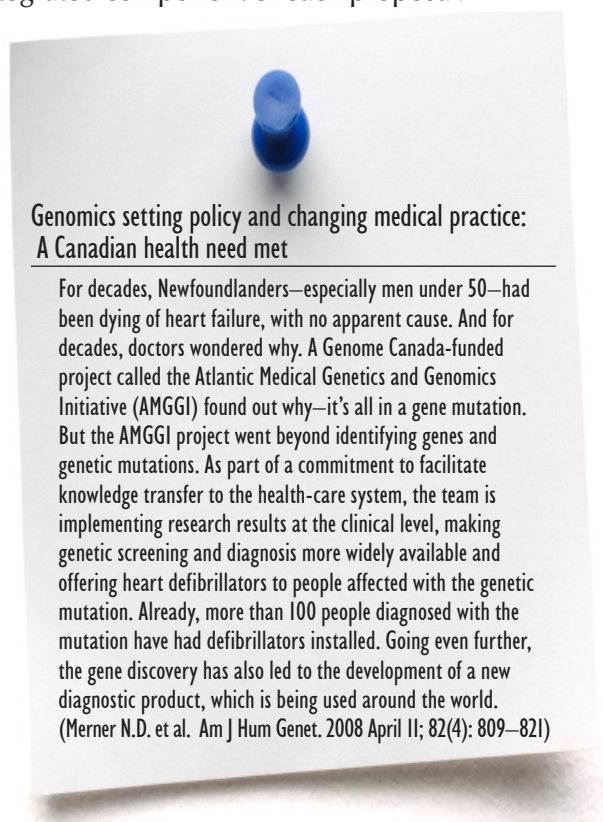
■ **Competition III**—The ongoing management and monitoring of all projects continued through 2009–10 with the expectation that the majority of projects would end by March 31, 2010. As part of the oversight process, these projects were provided the opportunity to request a no-cost extension (NCE) to March 31, 2011 if they have unspent funds forecast at the approved end date. No-cost extensions could be requested to:

- i) complete their approved objectives; or,
- ii) propose new or incremental research that directly supports or builds upon a project's approved objectives and will add significant value to the outcomes of the project.

Of the thirty Competition III projects due to end on or before March 31, 2010, twenty-seven have requested an NCE and three projects have stated they will not require an NCE. The three remaining projects, due to end between June 30, 2010 and September 30, 2010, will submit NCE requests to Genome Canada six months prior to their end date.

■ Applied Genomics Research in Bioproducts or

Crops Competition—A strategic competition on applied genomics research in the areas of crops, bioenergy and bioproducts was launched April 1, 2008. A total of 12 projects received funding support. Fiscal year 2009–10 focused on ensuring all conditions were met for the release of funds (process completed by September 2009), along with the initiation of project management and oversight.



SECTION II – Pursuing our Objectives: Performance for 2009–10

APPLIED GENOMICS RESEARCH IN BIOPRODUCTS OR CROPS FUNDED PROJECTS		
PROJECT	TOTAL BUDGET	GENOME CANADA FUNDING
Genome BC		
Genomics of Sunflower	10,478,569	4,961,933
Genomics of the Mountain Pine Beetle System: Using Genomics-Enhanced Forecasting to Secure Long-term Supplies of Lignocellulosic Feedstock from Forest Trees	7,795,142	3,691,540
Functional genomics of Wine Production	3,440,484	1,629,701
Genome Alberta		
Synthetic Biosystems for the Production of High-Value Plant Metabolites	13,602,099	6,443,096
Metagenomics for Greener Production and Extraction of Hydrocarbon Energy	11,259,517	5,033,698
Genome Prairie		
Value Generation Through Genomics (GE ³ LS)	5,413,101	2,553,656
Flax Genomics	11,785,158	5,645,463
Microbial Genomics for Biofuels and Bioproducts	10,574,798	4,877,146
OGI		
Bioproducts and Enzymes from Environmental Metagenomes (BEEM)	10,987,648	5,090,990
Genomics for Crop Improvement: Agricultural Pest Management	6,390,100	2,789,947
Genome Quebec		
Genozymes for bioproducts and bioprocesses development	17,422,936	8,138,852
Bridging comparative, population and functional genomics to identify and experimentally validate novel regulatory regions and genes for crop improvement	4,658,936	2,199,181
TOTAL	113,808,488	53,055,204

The following consortia, which are described under Objective 1, were also subject to a rigorous scientific review and due diligence process, as well as assessed for relevance to sectors of strategic importance to Canada—health, agriculture, environment, forestry, and fisheries:

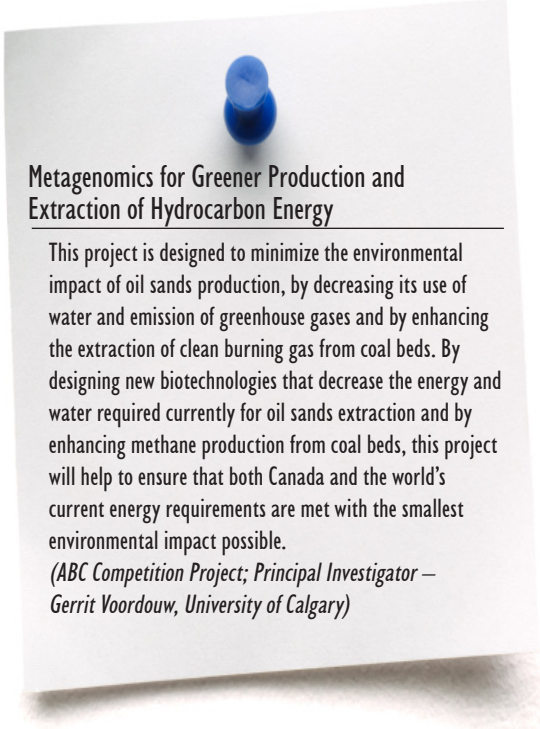
- Structural Genomics Consortium
- Public Population Project in Genomics
- International Barcode of Life
- International Regulome Consortium

What are the benefits?

Genome Canada’s international peer review process, which assesses excellence and relevance to Canada’s health, social and economic needs, together with its due diligence review of management and financial capabilities, ensures that funding goes to only the very best projects, as measured by international standards of excellence, which have the ability to create a Canadian advantage by fueling the discovery pipeline.

Genome Canada’s support of these large-scale projects has helped to develop a new generation of researchers, who are capable of working in well-integrated, trans-disciplinary teams across geographic boundaries; and who have acquired sophisticated management skills to ensure success of large, complex projects on an international scale.

Genome Canada’s commitment to supporting world-class research excellence in areas of strategic importance to Canada will not only allow Canada to maintain a leadership position within the international arena, but also will accelerate the translation of benefits for Canada.



Metagenomics for Greener Production and Extraction of Hydrocarbon Energy

This project is designed to minimize the environmental impact of oil sands production, by decreasing its use of water and emission of greenhouse gases and by enhancing the extraction of clean burning gas from coal beds. By designing new biotechnologies that decrease the energy and water required currently for oil sands extraction and by enhancing methane production from coal beds, this project will help to ensure that both Canada and the world’s current energy requirements are met with the smallest environmental impact possible.

(ABC Competition Project; Principal Investigator – Gerrit Voordouw, University of Calgary)

OBJECTIVE 4

The assumption of leadership in the area of ethical, environmental, economic, legal, social and other issues related to genomics research (GE³LS), and the communication of the relative risk, rewards and successes of genomics to the Canadian public.

Strategy (GE³LS Leadership)

Genome Canada's approach to ensure Canadian leadership in the areas of ethical, environmental, economic, legal and social issues related to genomics research is composed of various elements:

- Measuring GE³LS and Supporting Success
- Strengthening GE³LS Integration & Making it Meaningful
- Bridging the GE³LS Research–Public Policy Gap
- Bringing GE³LS Research "Home" to Canadians
- Showcasing Canadian GE³LS Research around the World
- Enabling a Vibrant GE³LS Research Community
- Translating GE³LS Research Results into Action

These elements are in addition to the support of large-scale GE³LS research projects having national and international impact, and the integration of GE³LS aspects in all other Genome Canada-funded projects.

What has been achieved?

In 2009–10, foundational work has been initiated in respect of all seven elements of the strategy, with particular focus on these three priorities:

■ **Enabling a Vibrant GE³LS Research Community**—In order to vitalize communication and networking across the GE³LS community, a new GE³LS website was launched in June 2009. Phase 1 of the website established basic communication with the GE³LS community by providing a transparent window on to Genome Canada's activities and making available useful informational resources for use by key audiences, including researchers, policy-makers and the general public. Based on feedback received through a student survey launched over the summer of 2009, Phase II of the GE³LS website will be further expanded to attract an even broader range of users and render it more modern, vibrant and relevant as a virtual communication and networking tool for the national GE³LS community. See: <http://www.genomecanada.ca/en/ge3ls/>

A new electronic newsletter called *Impact* was launched in June 2009, and integrated with the new GE³LS website. The newsletter features Genome Canada-funded GE³LS researchers, includes special guest columnists, introduces the new rising stars, and coordinates cross-country updates of GE³LS-related activities. The Spring '09 issue was dedicated to the theme of Knowledge Translation; the Winter '09 issue was on Integration; and the Spring '10 issue will be on Capacity Building. See: <http://www.genomecanada.ca/en/ge3ls/newsletters/>

■ **Bridging the GE³LS Research–Public Policy Gap**—A new Ottawa GE³LS Series, called "GPS: Where Genomics, Public Policy and Society Meet," was successfully launched in November 2009, in partnership with the Office of the Privacy Commissioner of Canada, Canadian Institutes of Health Research, the Council of Canadian Academies, the Public Policy Forum, the Policy Research Initiative of Canada and Carleton University School of Public Policy and Administration, Regulatory Governance Initiative. The objective of this series is to broker two-way knowledge transfer between GE³LS researchers and federal policy-makers by, 1) facilitating dialogue and debate needed to

SECTION II – Pursuing our Objectives: Performance for 2009–10

help inform evidence-based policy-making and 2) identifying future research priorities based on timely and socially relevant questions. The theme for the 1st Year series is “Genetic Information” and related sub-themes are: 1) Consent, Privacy and Research Biobanks; 2) Genetic Information and Discrimination; and 3) Online Direct-to-Consumer Genetic Testing. A new Policy Portal on Genome Canada’s GE³LS website disseminates information about the GPS events and the resulting Policy Briefs intended to synthesize knowledge on given issues and present a plausible range of policy options for addressing them. See: <http://www.genomecanada.ca/en/ge3ls/policy-portal/>

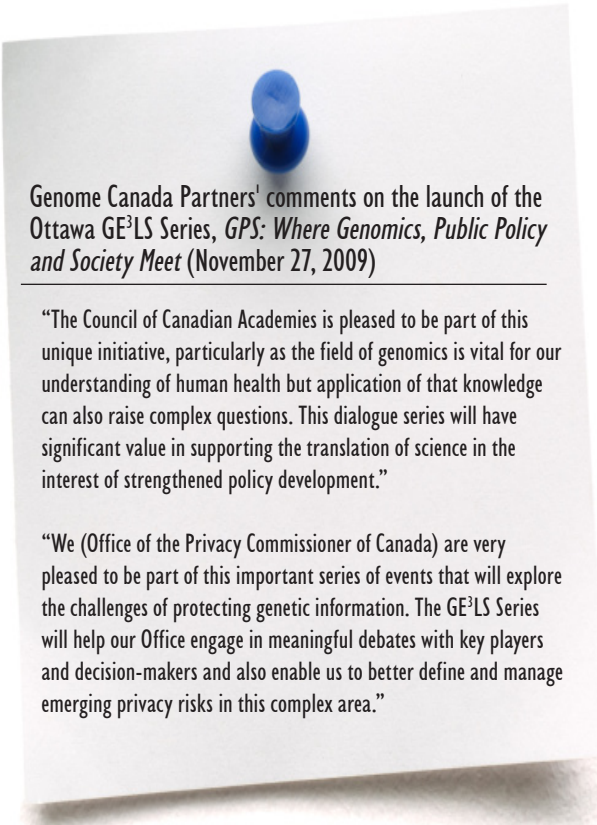
■ **Strengthening GE³LS Integration & Making it**

Meaningful—As part of Genome Canada’s ongoing efforts to strengthen the integration of GE³LS-related disciplines in genomics research, a new CanadaGE³LS research database was launched in June 2009.

This database provides direct access to summaries of GE³LS research projects funded not only by Genome Canada, but other major funders as well. The database provides an opportunity for health, natural and social science researchers to identify who is working in given areas or on particular issues—often the necessary first step for enabling contact, communication, networking, eventual team-building, collaboration and integration across established disciplines. Plans are currently underway to initiate the first year update of the CanadaGE³LS research database. See: <http://www.genomecanada.ca/en/ge3ls/research/compendium.aspx>

All projects funded through the ABC Competition in 2009–10 have integrated GE³LS components. These integrated GE³LS projects demonstrate in concrete terms how critical it is to anticipate, up front, legitimate concerns of technology end-users, policy-makers and the general public. Integrating GE³LS aspects into the development and implementation of the research plan is an indispensable condition for effectively addressing these concerns in socially responsible and acceptable ways, thereby enabling the ultimate fulfillment of project goals in the public interest. In addition, VALGEN, the large-scale GE³LS project funded through the ABC Competition, will explore next-generation models of GE³LS integration and provide valuable insights based on concrete evidence. Genome Canada staff continue to support the research and knowledge dissemination efforts of these GE³LS researchers. See <http://www.genomecanada.ca/en/portfolio/research/applied.aspx>

■ **General**—To ensure that implementation of the national GE³LS strategy continues to be aligned with the broader strategic objectives of Genome Canada, high level guidance is sought on a quarterly basis from the Informal Advisory Group on GE³LS, composed of two members of the Board of Directors and two members of the Science and Industry Advisory Committee. Furthermore, national GE³LS coordination continues through monthly conference calls of the GE³LS 7 network which joins together the GE³LS representatives of Genome Canada and all of the six regional Genome Centres.



Genome Canada Partners' comments on the launch of the Ottawa GE³LS Series, *GPS: Where Genomics, Public Policy and Society Meet* (November 27, 2009)

“The Council of Canadian Academies is pleased to be part of this unique initiative, particularly as the field of genomics is vital for our understanding of human health but application of that knowledge can also raise complex questions. This dialogue series will have significant value in supporting the translation of science in the interest of strengthened policy development.”

“We (Office of the Privacy Commissioner of Canada) are very pleased to be part of this important series of events that will explore the challenges of protecting genetic information. The GE³LS Series will help our Office engage in meaningful debates with key players and decision-makers and also enable us to better define and manage emerging privacy risks in this complex area.”

SECTION II – Pursuing our Objectives: Performance for 2009–10

In their continuing efforts to raise awareness about Genome Canada and its objective to assume national GE³LS leadership, Genome Canada staff have accepted a number of chairing and/or speaking engagements over the 2009–2010 time period to address GE³LS relevant topics, as well as a number of appointments on related committees of federal departments/agencies and regional Genome Centres to enhance coordination and collaboration.

What are the benefits?

As a result of the ongoing work throughout 2009–2010, Genome Canada's investments in the area of GE³LS are gaining visibility, relevance and impact for researchers, policy makers and the general public. The deployment of various new electronic tools has created a transparent window onto Genome Canada activities and provided a virtual meeting place where communication and networking can now take place among interested stakeholders of the national GE³LS community. Through the development of key partnerships and collaborations, and on the basis of successful events and concrete outcomes, Genome Canada is establishing itself as a credible, legitimate and relevant voice in federal public policy debates on GE³LS-related issues. Finally, through the further refinement of its national GE³LS strategy, Genome Canada is primed to support greater knowledge translation efforts and espouse the next generation of GE³LS integration in future competitions.

Strategy (Communications and Outreach)

Genome Canada's approach to communicate the relative risks, rewards and successes of genomics research to the Canadian public is to develop innovative communication, education and public outreach programs and initiatives aimed at establishing visibility, credibility and awareness.

What has been achieved?

In 2009-10, Genome Canada, in collaboration with the six Genome Centres, delivered education and public outreach activities which were tailored to specific audiences—the general public, media, parliamentarians, government policy and decision-makers, researchers, partners and other key stakeholders:

■ **News Releases and News Conference**—On April 20, 2009, Genome Canada held a news conference in Saskatoon with the Honourable Gary Goodyear, Minister of State, Science and Technology and Dr. Calvin Stiller, Chairman of the Board of Directors of Genome Canada, to announce 12 successful genomics research projects in the areas of bioproducts and crops. Canadian genomics researchers have received \$112 million to carry out the new projects. Of this, \$53 million was provided by the Government of Canada, through Genome Canada, and \$59 million by Canadian and international partners.

Genome Canada issued four news releases—including the announcement of two Canadian-led research projects funded through the innovative Partnership Program between Canada and California to advance Cancer Stem Cell research—in fiscal year 2009–2010 which were picked up by the national and international media for broad media coverage.

■ **The GEEE! in Genome**—*The GEEE! in Genome*, a 2500-sq-ft bilingual travelling exhibition now on its second tour across Canada, called The Children's Museum of Kitchener (Kitchener, Ontario) home from May 23 to September 7, 2009. The exhibit was an integral part of the Museum's summer camp program and welcomed almost 24,000 visitors who, in addition to viewing the exhibit, had the opportunity to participate in many entertaining programs, crafts and talks over the 15-week period. Prior to Kitchener, the exhibition had travelled to the Thetford Mines Mineralogical and Mineral Museum (Thetford Mines, Quebec) where visitors enjoyed an array of activities led by educators

and interpreters from January 15 to April 26, 2009. The exhibition opened in Vancouver on October 2nd, 2009 where it welcomed visitors until January 4, 2010. The Honourable Moira Stilwell, B.C. Minister of Advanced Education and Labour Market Development, officially opened the exhibition on October 15th during a ceremony attended by a number of guests and media at the Telus World of Science.

The GEEE! in Genome exhibit will be in Prince George, British Columbia, at The Exploration Place, from May 1 to September 5, 2010.

■ **Partnering with Youth Education Programs**—In 2009–10, Genome Canada partnered with the following youth education programs:

- the Canada-wide Science Fair, which attracts high-school students with the best science projects from across the country (May 2009);
- the Sanofi–Aventis Biotech Challenge (Spring 2009).

■ **Conference Support**—Genome Canada showed its support or presence at the following national and international genomics and proteomics events:

- Canadian Genetic Epidemiology and Statistical Genetics Meeting, Harrison Hot Springs, British Columbia (Spring 2009)
- IUFRO Tree Biotechnology Conference, Whistler, British Columbia (Summer 2009)
- HUGO-WHO (Human Genome Organization), Geneva, Switzerland (Fall 2009)
- HUPO (Human Proteome Organization), Toronto, Ontario (Fall 2009)
- BioContact, Quebec City, Quebec (Fall 2009)
- International DNA Sampling Conference, Banff, Alberta (Fall 2009)
- Electronic Health Information and Privacy Conference, Ottawa, Ontario (Fall 2009)
- International Data Release Workshop, Toronto, Ontario (Fall 2009)

What are the benefits?

Genome Canada's communication and outreach activities in 2009–10 continue to showcase Genome Canada's partnership with the Government of Canada and the Canadian scientific community; promote accountability for the investment of taxpayers' dollars; celebrate scientific achievements of Canadian researchers; and educate the Canadian public as to the relative risks, benefits and successes of genomics and proteomics research.



OBJECTIVE 5

The encouragement of investment by others in the field of genomics research.

Strategy

Genome Canada’s approach is to encourage investment by others in excellent large-scale genomics research projects through development of collaborative relationships with the private, public, and philanthropic sectors, both domestic and international. Genome Canada operates on the general principle that it will fund up to 50% of the eligible costs of research projects, with the remainder secured through co-funding by other organizations.

What has been achieved?

Since 2000, Genome Canada has raised \$919 million in co-funding to supplement the \$840 million invested by the Government of Canada over the past decade, resulting in more than \$1.7 billion of total funding for genomics research across all sectors.

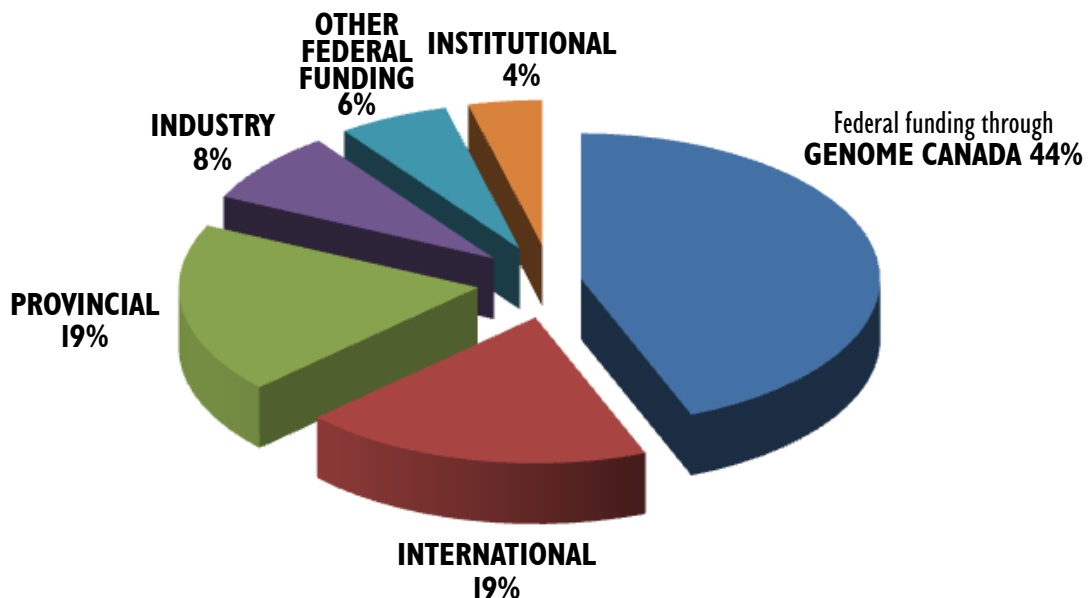
What are the benefits?

Effective research requires the collective efforts of many people and organizations. Investments by others through various collaborative mechanisms facilitates addressing research gaps and priorities and ensures that investments fund the best research and the translation of that research into results for Canadians. Genome Canada’s primary partners, the six regional Genome Centres, have played a central role in this success. In the past two years alone, the Centres have attracted significant provincial investment, including:

- \$50 million from the Government of British Columbia to Genome BC;
- \$100 million from the Government of Ontario for genomics research operations and infrastructure, including \$5 million to the Ontario Genomics Institute; and
- \$30 million from the Government of Quebec to Genome Quebec.

FUNDING SOURCES FOR GENOME CANADA-APPROVED PROJECTS (as of October 2009)

Note: Figure below does not include funding and related co-funding of Genome Centres.



SECTION III – Grant Management for 2009–10

The federal government, through Industry Canada, has approved a total of \$840M in funding for Genome Canada since 2000–01. All funding has come in the form of conditional grants, formalized through funding agreements between Genome Canada and Industry Canada.

As a not-for-profit organization, Genome Canada has the flexibility to maximize the grants it receives from the federal government through careful and judicious investment. It also has the ability to raise additional co-funding from other levels of government as well as from the private sector.

Investment and Management of Funds

Two Board Committees support the Board of Directors of Genome Canada in fulfilling its fiduciary responsibilities with respect to grant management. The Investment Committee is responsible for overseeing the investment and management of funds received from the federal government according to a Board-approved investment policy that outlines guidelines, standards and procedures for the prudent investment and management of funds. The Audit Committee is responsible for overseeing Genome Canada's policies, processes and activities in the areas of accounting and internal controls, risk management, auditing and financial reporting. Both committees meet quarterly and report to the Board on the outcome of their deliberations.

Source and Use of Funds

Grants received from the federal government in 2000–01 (\$160M) and 2001–02 (\$140M) funded the large-scale research projects and S&T Innovation Centres that were approved in Competitions I and II, for up to four years (2002–06). These grants also funded the operations of Genome Canada and the first five Genome Centres.

The grant received from the federal government in 2003–04 (\$75M) funded projects and associated S&T Innovation Centres that were approved for up to three years (2003–06) in the Applied Genomics Research in Human Health Competition.

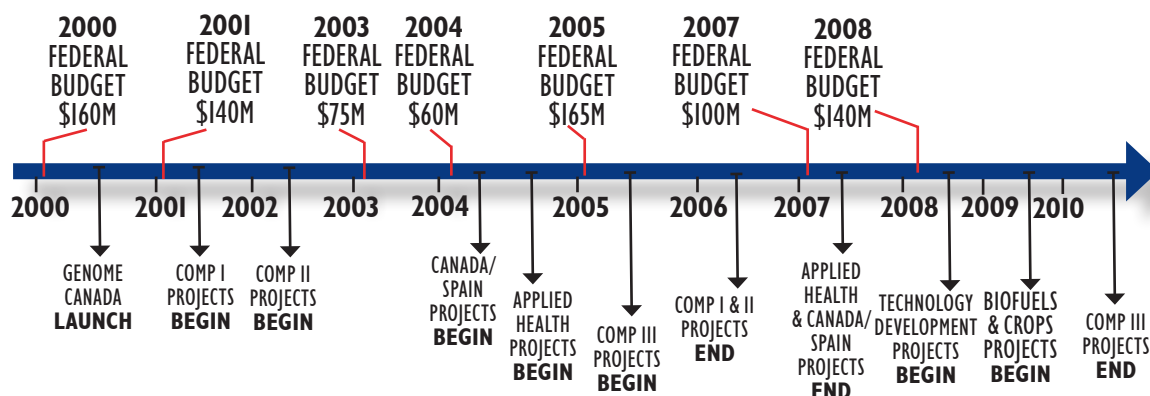
The grants received from the federal government in 2004–05 (\$60M) and in 2005–06 (\$165M) funded the projects that were successful in Competition III for three years, the operations of Genome Canada and six Genome Centres for three years, and the renewal of six S&T Innovation Centres until the end of fiscal year 2007–08.

The grant approved by the federal government in March 2007 (\$100M) has funded Competition III projects, the S&T Innovation Centres, Phase II of the Structural Genomics Consortium, and the operations of Genome Canada and the six regional Genome Centres through 2009–10.

The grant approved by the federal government in February 2008 (\$140M) funded a competition in Applied Genomics in Bioproducts and Crops, two research projects through the Cancer Stem Cell Consortium, the International Barcode of Life project, the S&T Innovation Centres, the operations of six regional Genome Centres, as well as the operations of Genome Canada through to 2012–13.

Interest income of over \$80M, earned through the federal investment, has allowed Genome Canada to launch other research initiatives over the preceding nine years, such as a bilateral research competition between Genome Canada and Genoma España, the Bovine Genome Sequencing Initiative, funding for two ICIs (the Structural Genomics Consortium Phase I and the Public Population Project in Genomics), as well as a competition in 2007–08 for New Technology Development projects.

Funding and Investments



Cash Management

Genome Canada disburses funds on a quarterly basis through the six regional Genome Centres for approved research projects and S&T Innovation Centres. Each Genome Centre is required to review quarterly, the expenditures to date and estimate cash requirements for each project and platform that it manages. It then submits a “draw request” to Genome Canada indicating the cash needs of the Centre for the subsequent quarter. The Genome Centres assess the project/platform needs against the approved budget, actual expenditures, scientific progress to date and co-funding received from other sources. Genome Canada then conducts its own thorough review of the draw request submission before releasing funds.

Annual Audits

As a not-for-profit, incorporated organization, Genome Canada selects external auditors to undertake an annual audit of its financial statements; the external auditors for 2009–10 are KPMG LLP. Auditors are required to submit an audit plan to Genome Canada’s Audit Committee in February 2010 for review and approval. The audit is conducted within 45 days of each fiscal year-end in accordance with generally accepted Canadian auditing standards. The objective is to express an opinion on whether Genome Canada’s financial statements present fairly, in all material respects, the financial position, results of operations, and cash flow of the corporation. Upon completion of the audit, the financial statements and a summary of audit findings are presented to the Audit Committee and then to the Board of Directors in June 2010 for approval.

Recipient Audits

In 2006–07, Genome Canada developed and implemented a Recipient Audit Framework in consultation with the Genome Centres. As part of this exercise, a risk assessment tool was developed to enable the Centres to identify projects and platforms that will undergo a detailed compliance audit. This framework was introduced to bring a common approach to recipient audits across Canada and to improve the management control framework within which genomics research is administered. A total of eleven recipient audits have been completed to date.

SUMMARY OF RECEIPTS AND DISBURSEMENTS*

DETAILS (in millions of dollars)

	Projects Funded	ACTUALS 2000–01 to 2008–09	FORECAST 2009–10	FORECAST CUMULATIVE to 2009–10
REVENUES				
Government of Canada		636.2	82.9	719.1
Investment Income		84.8	0.7	85.5
		721.0	83.6	804.6
PROGRAM DISBURSEMENTS				
Research Projects				
Competition I	17	80.6		80.6
Competition II	33	146.9		146.2
Competition III	33	150.6	37.2	187.6
Applied Genomics in Human Health Competition	14	59.9		59.9
Applied Genomics in Bioproducts and Crops	12		7.2	7.2
Bovine Genome Sequencing Project	1	6.0		6.0
Structural Genomics Consortium	1	23.2	4.4	27.6
Public Population Project in Genomics	1	6.6	6.6	13.2
International Regulome Consortium	1	2.4	0.2	2.6
International Barcode of Life	1	0.1	1.5	1.6
Genome Canada-Genoma España Competition	3	7.7		7.7
C. difficile	1	0.2	(0.1)	0.1
New Technology Development	13	4.3	5.0	9.3
Canadian Stem Cells Consortium	2		2.0	2.0
	133	487.8	63.8	551.6
S&T Innovation Centres	10	81.4	11.2	92.6
Genome Centres Operations		46.9	5.5	52.4
Operating Expenditures		56.9	9.0	65.9
TOTAL DISBURSEMENTS	143	673.0	89.5	762.5
Excess (Deficiency) of Receipts over Disbursements		48.0	(5.9)	42.1
Opening Cash Balance			48.0	
Closing Cash Balance		48.0	42.1	42.1

* As at January 2010

SECTION IV– Plans for 2010–11

In 2010–11, Genome Canada will continue to deliver its mandate as the primary funding and information resource for genomics research in Canada, aligning its activities to its five objectives. It will continue to conduct, as required, on-going monitoring and interim reviews of its large-scale research projects and S&T Innovation Centres in order to ensure milestones are met and to identify areas for improvement. Genome Canada will continue to consult broadly with its research community and other stakeholders with respect to determining strategic priorities for Canada as well as assessing and staying apprised of international developments in science and research.

The following section outlines Genome Canada’s planned activities for 2010–11. These plans align with its strategic approach that future investments be reflective of priorities, as determined by the Board of Directors, and deliver value for taxpayers’ dollars.

OBJECTIVE 1

The development and establishment of a coordinated strategy for genomics research to enable Canada to become a world leader in areas such as health, agriculture, environment, forestry and fisheries.

Planned Activities

- Working closely with the six Genome Centres and the Science and Industry Advisory Committee, Genome Canada will undertake, as appropriate, national consultations with key stakeholders with respect to genomics research opportunities of strategic relevance and priority to Canada.
- There will be continued secretarial support to the activities of the International Funders’ Forum.
- Genome Canada will continue to participate as a member of the steering committee of the International Knockout Mouse Consortium to assure Canada’s interests and investments in this consortium.
- Genome Canada will participate in the development of an R&D business plan for the establishment of the Canada–California Cancer Stem Cell Resource and Technologies Platform Network, which will form the basis of requests for funding from agencies in Canada and California.
- Genome Canada will participate as an observer on the Executive Committee of the International Cancer Genome Consortium.
- As a member agency of the Canadian Cancer Research Alliance, Genome Canada will participate as a member of the Board of Directors and contribute to the development of the CCRA’s new research strategy.
- There will be ongoing oversight of the following international consortium initiatives: Cancer Stem Cell, Structural Genomics, Public Population Project in Genomics and the International Barcode of Life.

OBJECTIVE 2

The provision of leading-edge technology to researchers in all genomics-related areas through regional Genome Centres across Canada, of which there are currently six, one each in British Columbia, Alberta, the Prairies, Ontario, Quebec, and the Atlantic.

Planned Activities

- Working with each Genome Centre, Genome Canada will monitor the successful technology development projects quarterly through reports describing progress to milestones. This will ensure that Genome Canada maintains proper financial oversight as well as awareness of any project outcomes such as publications, reports, and abstracts presented at meetings and conferences.
- In collaboration with the Genome Centres and the S&T Innovation Centres’ leaders, Genome Canada will continue to ensure maximum access and usage of the services provided by these innovation centres.

OBJECTIVE 3

The support of large-scale projects of strategic importance to Canada by bringing together industry, government, universities, research hospitals and the public.

Planned Activities

- There will be ongoing management and monitoring of all projects for Competition III including preparation for the receipt of final reports, as well as the management of no cost extensions for a majority of the projects.
- There will be ongoing management and monitoring of all projects for the Applied Genomics Research in Bioproducts or Crops competition.
- Under the aegis of its Emerging Issues funding envelope, Genome Canada will continue to seek out and be responsive to emerging opportunities, which may evolve into requests for funding.

OBJECTIVE 4

The assumption of leadership in the area of ethical, environmental, economic, legal, social and other issues related to genomics research (GE³LS), and the communication of the relative risks, rewards and successes of genomics to the Canadian public.

Planned Activities

In 2010–11, Genome Canada will continue to work with relevant federal partners and the regional Genome Centres in implementing its national GE³LS strategy, which includes the following activities:

- implement the second phase of its GE³LS national website;
- publish two further issues of its GE³LS e-newsletter, *Impact*;
- hold the second annual series of GPS events and publish related Policy Briefs;
- undertake the first year update of the CanadaGE³LS research database;
- continue to support ongoing GE³LS research, both stand-alone and integrated projects and facilitate knowledge translation activities.

Communicating the benefits of Genome Canada research funding to the Canadian public, showcasing Genome Canada's partnership with the Government of Canada and the Canadian scientific community, promoting accountability for the investment of taxpayers' dollars, celebrating scientific achievements of Canadian researchers, and educating the Canadian public as to the relative risks, benefits and successes of genomics research will continue to be priorities in 2010–11.

OBJECTIVE 5

The encouragement of investment by others in the field of genomics research.

Planned Activities

Genome Canada will continue to assess opportunities for future scientific and funding collaborations and will continue to nurture existing relationships to ensure effective completion of approved projects.

PLANNED RECEIPTS AND DISBURSEMENTS 2010–11*

The following table provides a preliminary estimate of the receipts and disbursements for 2010–11 and subsequent fiscal years. The estimate is based on statements of cash flow as presented to the Board of Directors at its December 2009 meeting. The operating budget for fiscal year 2010–11 will be presented to the Genome Canada Board of Directors for approval in March 2010.

DETAILS (in millions of dollars)	FORECAST CUMULATIVE 2000-01 to 2009-10	PLANNED 2010-11	PLANNED 2011-2012 to 2012-13	PLANNED CUMULATIVE 2000-01 to 2012-13	ESTIMATED CO-FUNDING FROM 2000-01 to 2012-13	TOTAL GENOME CANADA & CO- FUNDING	%
RECEIPTS							
Government of Canada	719.1	46.9	74.0	840.0		840.0	42.8
Investment Income	85.5	0.4	0.5	86.4		86.4	4.4
Co-Funding					1,035.6	1,035.6	52.8
	804.6	47.3	74.5	926.4	1,035.6	1,962.0	100.0
PROGRAM AND OPERATING DISBURSEMENTS							
Research Projects							
Competition I	80.6			80.6	73.7	154.3	7.9
Competition II	146.2			146.2	137.5	283.7	14.5
Competition III	187.6	17.0	2.0	206.6	218.6	425.2	21.7
Applied Genomics In Human Health Competition	59.9			59.9	69.8	129.7	6.6
Applied Genomics in Bioproducts and Crops	7.2	15.8	32.0	55.0	59.0	114.0	5.8
Bovine Genome Sequencing Project	6.0			6.0	63.4	69.4	3.5
Structural Genomics Consortium	27.6	4.0	0.7	32.3	175.3	207.6	10.6
Public Population Project in Genomics	13.2	2.6		15.8	55.4	71.2	3.6
International Regulome Consortium	2.6			2.6	0.4	3.0	0.2
International Barcode of Life	1.6	0.5		2.1	2.5	4.6	0.2
Genome Canada-Genoma Espana Competition	7.7			7.7	7.8	15.4	0.8
C. difficile	0.1			0.1	0.2	0.3	0.0
New Technology Development	9.3	0.6		9.9	9.5	19.4	1.0
Cancer Stem Cell Consortium	2.0	8.0	15.0	25.0	60.0	85.0	4.3
	551.6	48.5	49.7	649.8	933.0	1,582.8	80.9
S&T Innovation Centres	92.6	10.8	9.0	112.4	47.0	159.4	8.1
Genome Centres Operations	52.4	5.5	9.0	66.9	55.6	122.5	6.3
OPERATING EXPENDITURES	65.9	9.0	18.0	92.9		92.9	4.7
Total Disbursements	762.5	73.8	85.7	922.0	1,035.6	1,957.6	100.0
Excess (deficiency) of Receipts over Disbursements	42.1	(26.5)	(11.2)	4.4			
Opening Cash Balance		42.1	15.6				
Closing Cash Balance	42.1	15.6	4.4	4.4			

* As at January 2010

SECTION V– Performance, Audit and Evaluation

Genome Canada has a wide array of policies, systems and processes that have been developed over time to address issues of performance, audit and evaluation. In 2007–08, the Board of Genome Canada approved a Performance, Audit and Evaluation Strategy (PAES) to respond to specific requirements of the 2007 funding agreement with Industry Canada, and to ensure that a comprehensive and integrated approach to these functions was established and maintained.

The PAES can be viewed in full on Genome Canada’s website. Implementation of the Strategy began in 2008–09. The approved action plan delineated the concurrent undertaking of both a performance audit and an evaluation. Final reports on these two significant undertakings were submitted to the Board of Directors in March 2009. See <http://www.genomecanada.ca/en/about/accountability/>

Performance Audit

At the request of Industry Canada, a Performance Audit was carried out on Genome Canada in 2008–09 to ensure the economy, efficiency and effectiveness with which federal funds were used.

The audit concluded that mechanisms are in place that ensure transparency and reduce conflicts of interest in the review and approval of applications for funding, as well as to monitor the progress of funded projects; that funding themes are identified with input from the scientific community and through widespread consultations; that international partnership opportunities are guided by documented criteria that include consideration of partners’ ethics and values; and that performance measurement strategies and frameworks include defined performance measures.

The auditors’ final report may be viewed on Genome Canada’s website. It includes recommendations for improvement in a number of areas along with management responses. Progress on the responses will be monitored by the Audit Committee over the course of fiscal year 2010–11. See <http://www.genomecanada.ca/en/about/accountability/performance-audit.aspx>

Evaluation

The terms and conditions of Genome Canada’s funding agreements with Industry Canada specify that it shall carry out an independent third-party evaluation of its “Grants to Eligible Projects,” including the activities and projects of Genome Canada every five (5) years. It further states that the evaluation will measure overall performance in achieving the objectives identified in the Funding Agreement.

Genome Canada underwent an interim evaluation in 2003–04 which examined whether Genome Canada was on track towards meeting its objectives (which it was).

In 2008–09, Genome Canada underwent a full third party summative evaluation to determine to what extent it had achieved its objectives and mandate. The evaluation concluded that overall, the rationale for Genome Canada remains strong and important and that there has been a “transformative” impact of Genome Canada on Canadian genomics research. It also pointed out a number of qualifications and observations, but the evaluators emphasized that these were not serious issues but rather a reflection of the complex and rapidly changing environment in which Genome Canada operates.

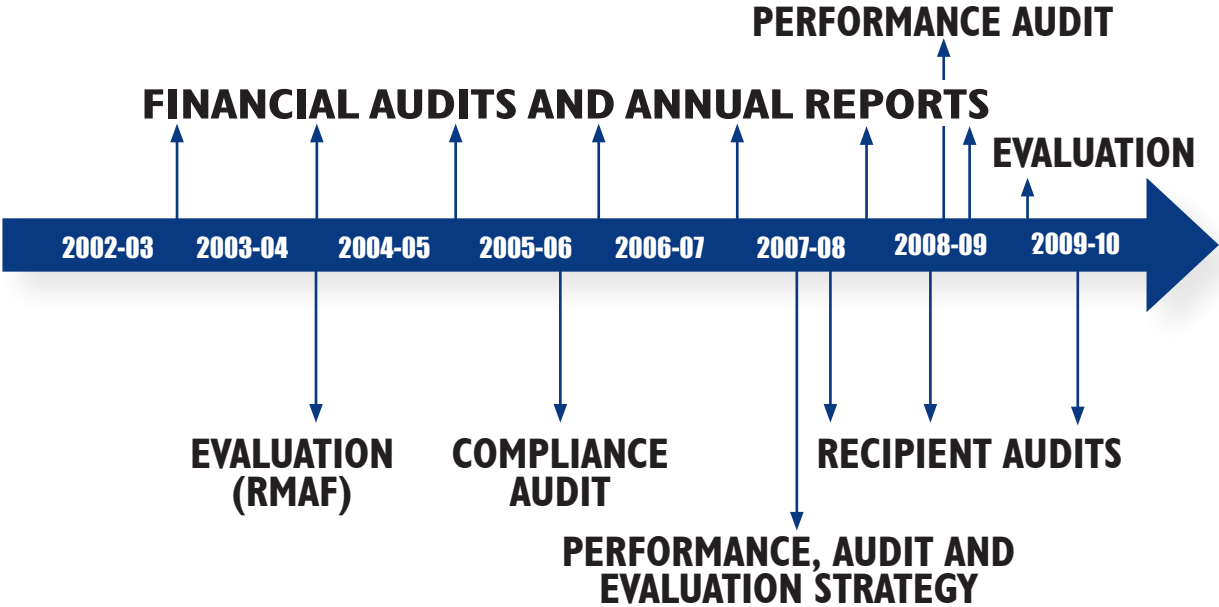
The Evaluation Report, as well as the details of an extensive bibliometric study on genomics research also conducted in 2008–09, can be viewed on Genome Canada’s website. See http://www.genomecanada.ca/en/about/accountability/five-year_evaluation.aspx

SECTION V – Performance, Audit and Evaluation

In fiscal year 2010–11, Genome Canada will focus on:

- a) completing the process for assessing final project reports in order to better evaluate the results of its research investments; and
- b) establishing a national data collection system for capturing performance information from across all projects in a consolidated manner.

PERFORMANCE MONITORING AND ACCOUNTABILITY



SECTION VI – Risks and Challenges

Risk Management

Risk management is integrated into all operational, managerial and governance activities of Genome Canada. Strategic risks arising from the external operating environment as well as the internal operational environment are assessed on an on-going basis.

- At the project selection level, risk is managed and mitigated through a process that ensures that only those projects judged to have the greatest probability of success from both a scientific and managerial point of view, are funded. The viability of the project's success is further mitigated through ongoing monitoring and interim review.
- At the operational level, officers of Genome Canada identify risks and propose strategies for mitigating and reporting (e.g., due diligence routines for review of draw requests and for interim reviews of funded projects).
- At the managerial level, policies, systems, processes and procedures (e.g., administrative, financial, human resources management, etc.) are developed, implemented and monitored.
- At the governance level, the Board and its Committees are aware of its risk management responsibilities and exercise modern governance practices with respect to policy approval and oversight.
- The Audit Committee regularly reviews Genome Canada's Risk Profile and mitigation strategies.
- The Genome Canada internal working environment culture is one that values honesty, integrity and ethical conduct.

Challenges

An ongoing challenge for Genome Canada is maintaining effective operations in light of new funding uncertainty for fiscal year 2010–11 and beyond—new funding that would support its genomics research programs, the S&T Innovation Centres, as well as the operations for Genome Canada and the Genome Centres. Alleviation of this uncertainty would allow for effective annual planning of operational and programmatic activities; assure continuing enhancements on leading-edge technology for the Canadian genomics research enterprise; and maintain the scientific leadership (both domestic and international) and momentum achieved after ten years of funding investment.

The above challenge also impacts the organization's succession planning on several fronts: its ability to retain highly qualified personnel over a period of fiscal funding uncertainty; its ability to attract and recruit a new President and Chief Executive Officer for Genome Canada who has the leadership skills, experience and vision to implement the organization's next five-year strategic plan; and its ability to recruit new members to the Board of Directors who have the passion and interest to guide Genome Canada to a successful achievement of its objectives.

ACKNOWLEDGEMENT

Government of Canada

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GenomeCanada
2000–2010

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