

genomics
bioeconomy
innovation
technology
science
jobs
enterprise
knowledge
quality of life
partnerships

transformation

Annual 2012-2013 Report



GenomeCanada



GenomeCanada

who we are

Genome Canada is a not-for-profit organization that invests in genomics research to generate economic and social benefits for Canadians. Genome Canada builds bridges between government, academia and industry to forge a genomics-based public-private innovation enterprise focused on key life science sectors. We develop these partnerships to invest in and manage large-scale research and translate discoveries into commercial opportunities, new technologies, applications and solutions.

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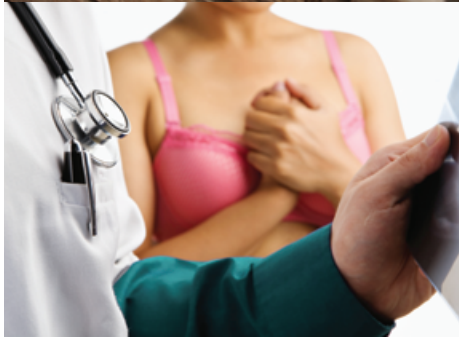
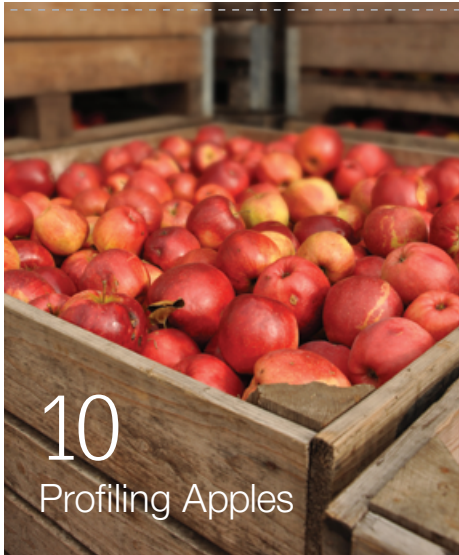
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Transforming the LIVES OF CANADIANS

DURING THE PAST SIX MONTHS in my new role as Chairman of Genome Canada, I have had the opportunity to tour some of Canada's outstanding genomics research facilities and meet first-hand with researchers. The work they are doing is truly incredible and is literally transforming the lives of Canadians. And the pace of transformation is accelerating weekly because of rapid advances in genomics technology. The cost and time it takes to sequence a whole human genome is only a tiny fraction of what it was 10 years ago.

Canadian genomics research is saving lives through improved screening, diagnosis, and treatment of diseases. It allows us to confirm the authenticity of food being sold at grocery stores and restaurants, to breed better cattle, protect our forests from invasive species, and enhance the quality and production of fish. I believe Genome Canada has an important leadership role to play as a major contributor to the general well-being of Canadians, thanks to Canadian genomics research.

These breakthroughs are a result of more than a decade's worth of federal investments that have helped to build a strong foundation and infrastructure for genomics research. Now, in 2013, Canada is a genomics powerhouse. With our new five-year **Strategic Plan** as the blueprint, Genome Canada is working at full tilt with its partners to translate genomics research knowledge into applications across multiple sectors where there is huge untapped potential — energy, mining, agriculture, fisheries and aquaculture, forestry, health, and the environment.

I thank the Government of Canada for recognizing the power and promise of genomics and committing \$165 million in multi-year funding to Genome Canada in 2013.

I also wish to thank my predecessor, Dr. Thomas Caskey, whose vision and leadership contributed to the strength Canada's genomics enterprise enjoys today. I look forward to building on this success in collaboration with my Board colleagues and the outstanding leadership and staff at Genome Canada.



Lorne Hepworth
Chairman, Board of Directors
Genome Canada





‘With our new five-year Strategic Plan as the blueprint, Genome Canada is working at full tilt with its partners to translate genomics research knowledge into applications.’



The Power of **PARTNERSHIPS**

‘Partnerships are the basis on which we leverage federal funding to bring the greatest possible value to each research project we support. It’s a powerful model, and it works.’



FISCAL YEAR 2012-13 was a notable one for Genome Canada, marked by several highlights. In addition to the \$165-million multi-year endorsement from the federal government, the year culminated in the formal announcement of 17 large-scale research projects selected for funding under our genomics and personalized health competition, an important partnership with the Canadian Institutes of Health Research. Led by some of Canada's top researchers at institutions across the country, they will focus on the application of genomics to tailor patient treatments and therapies in fields as diverse as epilepsy, autism, HIV/AIDS, cancer, cardiovascular disease, rare neurological diseases, and stroke, among others.

Another high point was funding awarded to 17 research projects in bioinformatics and computational biology — important new areas of focus that help to interpret and make use of the vast amounts of data generated by genomics research.

We also launched competitions to conduct genomics research into the emerging threats to society posed by *Listeria* and *E. coli* contaminating our food supply. With a relatively modest investment in each project, there is significant potential for major impacts in terms of averting illness and death and lowering costs to the food industry and health care system.

What underlined and supported all these activities was the power of our partnerships with six regional Genome Centres and a range of public and private sector partners. Partnerships are the basis on which we leverage federal funding to bring the greatest possible value to each research project we support. It's a powerful model, and it works.

I extend my sincere thanks to former Board Chairman, Dr. Tom Caskey, for his sound leadership and direction, as well as to all staff within Genome Canada and the regional Genome Centres. We are thrilled to have Lorne Hepworth as our new Board Chairman and we look forward to the exciting research developments we can expect in the year ahead.

Pierre Meulien, Ph.D.
President and Chief Executive Officer
Genome Canada

informed choices

Determining who is most at risk of breast cancer could fine-tune screening for all women



EVERY YEAR IN CANADA, 5,100 women die of breast cancer, and another 22,700 individuals are newly diagnosed with the disease. Almost a quarter are women under age 50, who are currently not eligible for routine breast-cancer screening. Within seven years, that could change.

With \$11.4 million in funding, an international team of scientists led by Dr. Jacques Simard of Laval University will spend the next four years creating a new genetic test, and a comprehensive risk-prediction model, to identify women of all ages with an increased susceptibility to breast cancer. These tools will allow doctors to combine genetic and non-genetic risk factors to determine how likely an individual is to develop breast cancer. Provincial governments might then conduct pilot tests to assess the public health benefits of basing screening guidelines on relative risk, rather than just age.

“By the end of this project, we will be able to identify 10 times more women at risk,” says Dr. Simard. “This represents a significant proportion who currently are not effectively screened.” The same tools will also determine which individuals have a lower-than-average risk of breast cancer, possibly leading them to extend the interval between routine breast scans.

This significant advance in personalized health is the culmination of 20 years of research by Dr. Simard and his interdisciplinary team. Recently, an international consortium, with whom he works, identified 49 new genetic markers for breast cancer, bringing the total now known to 76.

The McGill University and Génome Québec Innovation Centre was “critical” to this major breakthrough, says Dr. Simard; it was chosen to analyze samples from 100,000 individuals around the world because of its state-of-the-art technology and expertise.

Genome Canada’s major partners in the breast cancer risk stratification project are the Canadian Institutes of Health Research and Génome Québec.

research testing
screening



“In younger women, breast cancer tends to be more aggressive. Detected early, survival rates will be better with less aggressive treatments.”
— *Dr. Jacques Simard, geneticist*

Genome Canada funds five leading-edge Science and Technology Innovation Centres — in Montreal, Toronto, Edmonton, Vancouver, and Victoria — whose primary mandate is to provide genomic and related technology services for large-scale research projects selected on the basis of their international competitiveness and scientific excellence. In the fiscal year 2012-13, it contributed \$24.3 million to these Centres.

profiling apples

Researchers in Nova Scotia aim to put Canada on the map as the world centre for apple genomics

WITH ITS FERTILE SOIL and mild temperatures, Nova Scotia's Annapolis Valley has long been famous for its apple harvest. In a decade and a half, it could also be known as the online prebreeding centre for apple growers around the world.

This spring, a team led by Dalhousie University geneticist Dr. Sean Myles planted more than 1,000 different varieties of apples — two each, 2,500 seedlings in all, including controls — on a five-acre tract at Agriculture and Agri-Food Canada's research centre in Kentville. The researchers have already begun systematically mapping each variety's genome, the first step to finding the genes responsible for specific traits related to fruit quality and disease resistance.

The goal is to dramatically reduce the time it takes to produce a new apple cultivar. Traditionally, this has been a laborious, time-consuming, and expensive process. Breeders cross two varieties, plant hundreds of seedlings, then wait years for these offspring to reach maturity before they can evaluate their fruit. Typically only a few trees are chosen for further propagation; the rest are discarded.

In the future, says Dr. Myles, breeders will be able to browse an online catalogue listing the genetic profile of each variety, select two to mate, and place an order. Technicians will analyze the offsprings' DNA while they are still seedlings in the greenhouse, and ship the ones with the desired traits to the grower.

It has been said that if genomes were books, each one would be equivalent to 800 dictionaries. It is no small task then to manage, analyze, and interpret all the information necessary to determine desirable genetic profiles in new cultivars. To make sense of reams of data, Dr. Myles' team received \$250,000 in a 2012 competition to develop new user-friendly software with applications for other high-diversity crops.





The Dalhousie “small-scale, innovative” project was one of 17 successful applications in the 2012 Bioinformatics and Computational Biology Competition, held in partnership with the Canadian Institutes of Health Research. The total value of these research projects, some of them large-scale, is almost \$11 million.



“It’s a million times cheaper to collect genetic data now than it was a decade ago.”

— *Dr. Sean Myles, geneticist*



cranking up surveillance

Inexpensive DNA testing has uncovered widespread deception in the labelling of meat and fish for humans and their pets

IN 2011, WHEN *The Boston Globe* published the results of its five-month investigation into the mislabelling of seafood in supermarkets and restaurants in Massachusetts, consumers were disturbed. There was a good chance, they learned, that the expensive, locally caught flounder or red snapper they ordered was actually a much-cheaper fish — often farmed and shipped thousands of miles.

In all, the newspaper found that almost half of the 183 samples it collected from 134 sources were misnamed. A follow-up investigation last year showed not much has changed; other studies have shown mislabelling is widespread across North America.

The issue has come under scrutiny as a result of groundbreaking Canadian research. Ten years ago, scientists at the University of Guelph, led by Dr. Paul Hebert, proposed a revolutionary new system of species identification. With less than a milligram of tissue, the researchers have shown, it is possible to isolate, replicate, and sequence a short section of DNA from a standardized area in all animals' genomes. Comparing the resulting "barcode" to their rapidly expanding DNA reference library quickly and inexpensively pinpoints the species.

From its base at the Biodiversity Institute of Ontario — the scientific hub of the International Barcode of Life (iBOL) project — Dr. Hebert's team did the DNA analysis for *The Boston Globe*. It also worked with the U.S. Food and Drug Administration to institute barcode-based testing as part of the American federal inspection and enforcement program.

Dr. Hebert says more transparency is needed in the Canadian marketplace, as well. Recent DNA barcode testing by his team found, among other things, ground chicken sold as turkey, steak and hamburgers from zebu cattle not raised in Canada, and pet food made of mackerel that contained not a trace of the salmon and sardines listed on its label.



The International Barcode of Life (iBOL) project, led by Canadian geneticist Dr. Paul Hebert, is the largest biodiversity genomics initiative ever undertaken. More than 250 researchers from 26 countries are working together to build a DNA reference library for all multi-cellular life. Genome Canada has invested \$11 million in this international consortium since it was launched in 2009.



“You don’t speed down the highway if you know there is a police officer with a radar gun.”

— *Dr. Paul Hebert on how DNA testing will reduce food mislabelling*



stopping strokes

A quick blood test would help physicians triage patients so the right people get the right treatment at the right time

A **MINI STROKE**, called a transient ischemic attack (TIA), is a medical emergency that occurs when the blood flowing to your brain stops for a short time. One side of your body might suddenly feel weak or you may have trouble speaking or understanding what people are saying to you.

The good news is that a TIA usually causes no permanent damage and, in fact, could be the proverbial cloud with a silver lining because it gives a patient the opportunity to stave off a potential full-blown stroke by seeking immediate medical attention. The glitch is there is no fast and easy means of differentiating the 50,000 Canadians arriving at emergency departments every year with actual TIAs, from an equal number who show up with symptoms mimicking TIAs — from, for example, migraines. The latter may be subjected to unwarranted, and costly, radioimaging; the former, sent home without appropriate diagnostic tests or treatment.

“The unfortunate truth is that we’re not really

doing a very good job managing minor strokes,” says Victoria-based neurologist Dr. Andrew Penn. “The brain is the last frontier.”

In just four years, however, hospitals on Vancouver Island will be able to diagnose TIAs much the same way they do heart attacks, thanks to a personalized-health research project led by Dr. Penn and supported by a \$10-million investment from Genome Canada, the Canadian Institutes of Health Research, Genome BC, the Vancouver Island Health Authority, and four other partners.

A multidisciplinary team of scientists will evaluate some 80 genetic proteins using mass spectrometry to determine which have the strongest links to strokes; clinicians will assess the resulting multi-protein blood test and accompanying decision-aid software with TIA patients in Victoria and Calgary.

Once physicians across Canada gain access to this quick, inexpensive technology, it is expected to avert 4,000 strokes a year, and save \$210 million in direct health-care costs alone.

Genome Canada, the Canadian Institutes of Health Research and their partners invested \$150 million in 17 large-scale personalized-health research projects across Canada in 2012-13. They are investigating new genetic-based approaches to tailoring the treatment of such debilitating diseases as epilepsy, autism, HIV/AIDS, cardiovascular and rare neurological diseases, and several cancers.



“What’s exciting about these projects is that each one holds enormous potential for breakthroughs where there is a serious clinical need.”

— Dr. Pierre Meulien,
President and CEO of Genome Canada



the year in review

July 2012

GENOME CANADA, the Canadian Food Inspection Agency, and Alberta Innovates Bio Solutions launched a \$600,000 project to help protect consumers from the serious foodborne illness listeriosis. An outbreak of *Listeria* bacteria, which survives freezing, dehydration, and heat, at a Toronto meat processing plant in 2007 was subsequently linked to the deaths of at least 20 people across Canada.

The 18-month project aims to map the genome of several isolates of *Listeria* in order to develop faster, more accurate tests for its detection.

September 2012

Lorne Hepworth, a member of the Board of Directors of Genome Canada since June 2010, was appointed Chairman.

A graduate of the Western College of Veterinary Medicine at the University of Saskatchewan (1971), Mr. Hepworth was a practicing veterinarian in Alberta and Saskatchewan until 1982, when he was elected to Saskatchewan's Legislative Assembly, where he subsequently served nine years in Cabinet.

From 1993 to 1997, he held several executive positions with the Canadian Agra group of companies specializing in agri-food/feed production, and led the development of the International Division's Agricultural Project in China.

Since 1997, Mr. Hepworth has served as President of CropLife Canada, the trade association representing developers, manufacturers, and distributors of plant science innovations for use in agriculture, urban, and public health settings. He has been a member of the Canadian Agri-Food Research Council, the federal government's Pest Management Advisory Committee and National Biotechnology Advisory Committee.



November 2012

Genome Canada joined a consortium of Canadian research organizations investing just over \$1 million in one or two projects that will develop a genomics-based test to detect the pathogen *E. coli* during food production, especially at meat plants. The new technology will be sensitive, affordable, field deployable, and take less than an hour. Currently, most *E. coli* testing is done in a laboratory and takes 10 hours.

Genome Canada's funding partners in the 2012-13 Program on Research and Innovation Leading to Rapid Detection of Pathogenic *E. coli* are Genome Alberta, Alberta Livestock and Meat Agency, and Alberta Innovates Bio Solutions. The Ontario Ministry of Agriculture Food and Rural Affairs is a supportive partner.

November 2012

Dr. Eric Lander (RIGHT), a top science advisor to U.S. President Barack Obama, was the keynote speaker at the conference “Genomics: The Power and the Promise,” co-sponsored by the Gairdner Foundation and Genome Canada at the Ottawa Convention Centre. A mathematician turned geneticist, Dr. Lander is founder of the Broad Institute at the Massachusetts Institute of Technology and Harvard Medical School.

Some 278 individuals from universities, government departments, companies and research institutes participated in the two-day event. Surveyed afterward, the majority of respondents thought the conference was good or excellent in providing informative and well-presented content.

“Because genomics is really interesting and Eric Lander is a rock star!”

— An attendee at November’s Power and the Promise conference explains why he went.



Genome Canada welcomed the federal budget announcement of \$165 million in new funding for genomics research.

“Genomics is a transformative technology that will play a key role in addressing the most pressing challenges facing society in the 21st Century,” said Dr. Pierre Meulien (RIGHT), president and CEO. “This critical funding commitment will enable Genome Canada to build and improve ways of translating discoveries into new applications that lead to economic and social benefits as quickly as possible.”



March 2013



Dr. Stephen Scherer (SECOND FROM RIGHT) gives Minister of State (Science and Technology), Gary Goodyear (SECOND FROM LEFT), and Parliamentary Secretary to the Minister of Industry, Mike Lake (FAR RIGHT), a tour of one of Canada’s renowned genomics sequencing labs following the announcement of the results of a \$150-million genomics and personalized health competition.

March and April 2013

More than 300 people attended four workshops in Ottawa, Toronto, and Winnipeg to review how the pressing challenges of their industries — forestry, energy and mining, fisheries and aquaculture, and agri-food — could benefit from genomics applications. In part, the workshops explored ways that public and private stakeholders could collaborate to spur innovation, increase productivity, and improve the competitiveness of our natural resource-based economy, while also ensuring its sustainability.



Discovery • Impact • Success

Pursuing our **NEW OBJECTIVES** (2012-13)

Fiscal year 2012-13 was the first year that Genome Canada began to implement its new **Strategic Plan 2012-2017** and pursue four new corporate objectives.

These objectives will guide Genome Canada's activities until at least 2017. Here is a record of Genome Canada's activities, outputs, and intermediate outcomes by objective for the fiscal year.

objective 1

Respond to societal needs by generating discoveries and accelerating their translation into applications.

- Consulted broadly with industry, academia, governments, not-for-profits, and international stakeholders, who are potential users of genomics research, on the development of the Genomic Applications Partnership Program (GAPP), and drafted a GAPP Investment Strategy informed by user needs. GAPP is a new program that will help bridge the gap between academia and users of genomics and play a key role in nurturing the public/private interface, thereby transforming the results of research into useful applications with maximum benefit.
- Delivered the 2012 Large-Scale Applied Research Project Competition on Genomics and Personalized Health, a partnership with the Canadian Institutes of Health Research (CIHR) and the Cancer Stem Cell Consortium. Seventeen projects were selected for a total of \$150 million in funding (\$45 million from Genome Canada). The projects will focus on the application of genomics to tailor patient treatments and therapies in fields as diverse as epilepsy, autism, HIV/AIDS, cancer, cardiovascular disease, rare neurological diseases, and stroke, among others.
- Developed program collaborations with public and private sector partners to address the emerging issue of food safety by integrating genomic technologies for the detection and surveillance of *Listeria* and *E. coli*.
- Monitored and oversaw projects funded under the Entrepreneurship Education in Genomics (EEG) pilot program, which aims to accelerate the conversion of scientific discoveries into commercial successes or other applications. Began planning for a June 2013 workshop to share best practices and inform future EEG competitions with a particular emphasis on how to help scientists become more entrepreneurial and how to get young entrepreneurs interested in genomics.
- Provided leading-edge technology and expertise to Canadian genomics researchers through ongoing funding support for five Science and Technology Innovation Centres across Canada. Planned and implemented a renewal process for their continued operational support to be completed April 2013.

- Launched and delivered the 2012 Bioinformatics and Computational Biology Competition, in partnership with CIHR. The projects funded through this program will help manage, analyze and interpret vast amounts of genomics data to accelerate applications in areas such as personalized medicine, public health, agriculture and other areas of importance to Canadians and the economy. Seventeen projects were selected for a total of \$11 million in funding (\$5 million from Genome Canada).
- Announced call for proposals for “Advancing Big Data Science in Genomics Research” — a first-ever partnership with the Natural Sciences and Engineering Research Council (NSERC), the lead organization, the Canada Foundation for Innovation (CFI) and CIHR, which will see a variety of disciplines come together to tackle high volumes of data. It is anticipated that the new knowledge gained and disseminated through this initiative will facilitate breakthrough discoveries and innovation in genomics, engineering, medicine, and other disciplines, pushing Canada to the forefront of big data science in genomics research.
- Genome Canada’s Science and Industry Advisory Committee struck a task force to determine Genome Canada’s future role in the area of disruptive technologies as it relates to ‘omics’ (genomics, proteomics, metabolomics) technology development. Disruptive technologies revolutionize industries and society, such as next-generation gene sequencing, which has revolutionized the field of medical research allowing us to move closer to an era of personalized medicine. Genomics is technology-driven and expertise in the development of disruptive technologies will keep Canada at the leading edge. During the fiscal year, the task force planned for a May 2013 workshop to consult with leaders in the field to establish recommendations for future directions.
- Continued monitoring and oversight of all successful projects funded through the Applied Genomics Research in Bioproducts or Crops Competition. Early indications of outcomes include collaboration with industries in various sectors to develop processes to reduce harmful by-products they produce.
- Continued monitoring and oversight of all successful projects funded through the 2010 Large-Scale Applied Research Project Competition, which targeted forestry and the

environment among other strategic sectors. Each of the projects funded in this competition is focusing on important questions and challenges faced in their respective sector and involve end-users of genomics technology. For example, they are exploring ways to make Canada’s forests more sustainable, improve the health of our livestock and crops, and find potential new treatments for cancer and rare diseases.

- Supported Canada’s key participation in a number of international and national consortia including: Structural Genomics Consortium (SGC); International Barcode of Life (iBOL), Public Population Projects in Genomics (P3G), Cancer Stem Cell Consortium (CSCC), the International Mouse Phenotyping Consortium (IMPC), International Cancer Genome Consortium (ICGC), and the International Wheat Genome Sequencing Consortium (IWGSC). These provide opportunities to lead and be part of international research initiatives in areas that address unique scientific questions of importance to Canada and the world.

objective 2

Attract greater investment in genomics research from a broad range of stakeholders, in particular the private sector.

- Established strategic partnerships with industry, government and other funding organizations in areas of mutual interest and leveraged federal funds to attract increasing levels of co-funding for new programs. As per targets set out in the new strategic plan, Genome Canada is succeeding at leveraging federal funding beyond the traditional 1:1 ratio. The following list indicates co-funding ratios for some of our new key initiatives (Genome Canada: others):
 - 1:2.3 – Genomics and Personalized Health Competition
 - 1:5 – *Listeria* Emerging Issue call
 - 1:3 – *E. coli* Emerging Issue call
 - 1:3 – Advancing Big Data Science in Genomics Research
- Worked with regional Genome Centres and their stakeholders on the development of sector strategies, with a view to engaging potential users of genomics research from diverse sectors. Workshops were coordinated by Genome Centres on agri-food, energy and mining, and forestry during the fiscal year with support from Genome Canada.

objective 3

Enhance the impact of genomics by transforming knowledge of the ethical, environmental, economic, legal and social challenges and opportunities into sound policies and practices.

- Ensured a GE³LS (genomics ethical, environmental, economic, legal and social) component is supported in each of the 17 Genomics and Personalized Health projects funded.
- Worked toward the development of a new targeted funding opportunity, known as the “Third Modality” of the Genomics and Personalized Health Competition, intended to promote networking, identify and address overarching research questions and/or gaps in GE³LS efforts that may require attention, and synthesize GE³LS research efforts to facilitate the translation into sound practices and policies.
- Collaborated with CIHR to plan a workshop on exploring the social/ethical and health system challenges of whole genome sequencing.
- Explored potential partnerships with the Social Sciences and Humanities Research Council (SSHRC) to support GE³LS research (such as in the area of disruptive technologies).
- As part of the ongoing “GPS: Where Genomics, Public Policy and Society Meet” series, created a policy brief based on the theme “the innovation continuum” focused on moving promising technologies off the shelf, which was presented and debated at the 2012 Canadian Science Policy Conference. Initiated planning for the next GPS (2013) that will push this theme forward by examining the uptake of technologies.
- Organized a panel for the May 2013 Canadian Bioethics Society workshop to explore what GE³LS has contributed to the Canadian bioethics landscape.

- Enhanced accountability through appearances before various Senate and House of Commons Standing Committees (e.g., Industry, Science and Technology, Agriculture and Forestry, and Health) as well as multiple presentations at stakeholder forums. Also led an ad hoc genetic discrimination

working group to facilitate exchange of information and ideas among key stakeholders.

objective 4

Enhance the recognition of the value of genomics by increasing stakeholder appreciation of genome science, its applications and its implications.

- Sponsored major international and national events including HUGO 2012 (the largest international human genome conference), BIO 2012 (the biggest international biotech conference), and the 2012 Canadian Science Policy Conference (a key forum for science policy dialogue in Canada).
- Organized a signature conference “Genomics: The Power and the Promise” in partnership with the Gairdner Foundation, held in Ottawa on November 27-28, 2012. Speakers included internationally-renowned scientists in the field of genomics. The event was well attended by scientists, government officials, public policymakers and senior industry representatives. Furthermore, other ancillary activities were organized around the event, including a public forum held at the Canada Science and Technology Museum attended by members of the public, including many students.
- Commissioned an external consulting agency to conduct a qualitative survey with key federal government opinion leaders to establish a baseline of awareness and understanding of genomics and the bio-economy, and perceptions of Genome Canada. The final report provided strategic recommendations to help guide Genome Canada’s communications program.
- Developed Communications Plan for fiscal year 2013-14, which aligns and complements objectives of the Strategic Plan.
- Collaborated with the regional Genome Centres on planning and coordination of Ministerial events and announcements and initiated planning for future national communications initiatives (such as a National Dialogue Series on food).
- Developed and distributed a new corporate pamphlet and increased corporate profile through strategic advertisement placements and interaction with national media in relation to major events and announcements. National media coverage achieved in connection with the public announcement of Genomics and Personalized Health Competition results.

IN ADDITION TO THE ACTIVITIES DESCRIBED ABOVE, in 2012 planning for a five-year evaluation of Genome Canada began. The time frame of the evaluation, 2009-2014, spans both Genome Canada’s inaugural mandate and its new strategic direction. The evaluation will look at issues of relevance and performance of Genome Canada and will provide Genome Canada’s Board of Directors, stakeholders, funders, senior management, and staff with objective, timely and evidence-based information on the outcomes and impacts of Genome Canada’s programs, policies, initiatives and organizational processes. Recommendations and insight from the evaluation will inform ongoing program and strategic development to move forward as an enterprise.

Funded Projects and Operations in 2012-13

A RIGOROUS COMPETITIVE process determines which research projects and Science and Technology Innovation Centres (S&T Innovation Centres) throughout Canada will be funded. Projects are selected through a system of peer review which includes an assessment of the scientific merit of the proposal and its potential socio-economic benefits for Canada, and a concurrent due diligence review of the proposed management structure, the proposed budget and related financial data, including co-funding. Reviewers are chosen for their recognized expertise in the science, socio-economic benefits and management of large-scale genomics projects, and are drawn from the international scientific community to avoid conflict of interest. Genome Canada's Board of Directors makes the final decision on which proposals to fund, based on recommendations received from the international panel of reviewers. Most Genome Canada funded projects also undergo an interim (mid-term) evaluation undertaken by an international peer review panel that assesses the progress of each project and makes recommendations that include whether funding should be continued, adjusted, or terminated.

The following table lists active research projects in 2012-13 and includes total approved funding for each project over its full term.

Large-scale projects

SECTOR	CENTRE	STATUS	PROJECT LEADER(S)	PROJECT TITLE	TOTAL GC CONTRIBUTION
Agriculture	Genome British Columbia	Interim Review Completed	Lund, Steven van Vuuren, Hennie	Grape and Wine Genomics	\$1,629,702
Agriculture	Genome Alberta	Interim Review Completed	Facchini, Peter Martin, Vincent	Synthetic Biosystems for the Production of High-Value Plant Metabolites	\$6,443,096
Agriculture	Genome Alberta	In-Progress	Plastow, Graham Harding, John Kemp, Bob	Application of genomics to improve swine health and welfare	\$4,899,109
Agriculture	Genome Alberta	In-Progress	Miller, Stephen	Whole Genome Selection through Wide Imputation in Beef Cattle	\$3,860,664
Agriculture	Genome Prairie	Interim Review Completed	Rowland, Gordon Cloutier, Sylvie	Total Utilization Flax GENomics (TUFGEN)	\$5,645,463
Agriculture	Genome Prairie	In-Progress	Pozniak, Curtis Hucl, Pierre	CTAG-Canadian Triticum Advancement through Genomics	\$4,102,385
Agriculture	Ontario Genomics Institute	Interim Review Completed	Grbic, Miodrag	Genomics in Agricultural Pest Management (GAP-M)	\$2,789,939
Agriculture	Génome Québec	Interim Review Completed	Bureau, Thomas	Bridging comparative, population and functional genomics to identify and experimentally validate novel regulatory regions and genes for crop improvement	\$2,199,181
Energy	Genome British Columbia	In-Progress	Rieseberg, Loren	Genomics of Sunflower	\$4,961,933
Energy	Genome British Columbia	Interim Review Completed	Douglas, Carl Mansfield, Shawn	POPCAN: Genetic improvement of poplar trees as a Canadian feedstock	\$4,879,622
Energy	Genome Alberta	Interim Review Completed	Voordouw, Gerrit	Metagenomics for Greener Production and Extraction of Hydrocarbon Energy	\$5,033,698

SECTOR	CENTRE	STATUS	PROJECT LEADER(S)	PROJECT TITLE	TOTAL GC CONTRIBUTION
Energy	Genome Prairie	In-Progress	Levin, David Sparling, Richard	Microbial Genomics for Biofuels and Co-products from Biorefining Processes	\$4,877,146
Environment	Genome British Columbia	In-Progress	Eltis, Lindsay Mohn, William	Harnessing microbial diversity for sustainable use of forest biomass resources	\$3,869,964
Environment	Genome British Columbia	In-Progress	Tang, Patrick Isaac-Renton, Judith	Applied Metagenomics of the Watershed Microbiome	\$1,582,765
Environment	Genome British Columbia	Interim Review Completed	Foster, Leonard	Next-generation integrated pest management tools for beekeeping	\$2,858,080
Environment	Ontario Genomics Institute	In-Progress	Edwards, Elizabeth Major, David	BEEM: Bioproducts and Enzymes from Environmental Metagenomes	\$5,090,990
Environment	Ontario Genomics Institute	Interim Review Completed	Hajibabaei, Mehrdad	Biomonitoring 2.0: A high-throughput genomics approach for comprehensive biological assessment of environmental change	\$1,556,879
Environment	Génome Québec	In-Progress	Tsang, Adrian	Genozymes for Bioproducts and Bioprocesses Development	\$8,138,852
Environment	Génome Québec	Interim Review Completed	Lang, B. Franz Hijri, Mohamed	Improving Bioremediation of polluted soils through Environmental Genomics	\$3,789,354
Forestry	Genome British Columbia	In-Progress	Bohlmann, Jorg Cooke, Janice	Genomics-Enhanced Forecasting Tools to Secure Canada's Near-Term Lignocellulosic Feedstock Supply for Bioenergy using the Mountain Pine Beetle-Pinus spp. System	\$3,691,541
Forestry	Genome British Columbia	In-Progress	Aitken, Sally Hamann, Andreas	AdapTree: Assessing the adaptive portfolio of reforestation stocks for future climates	\$2,320,251
Forestry	Genome British Columbia	In-Progress	Hamelin, Richard	Genomics-Based Forest Health Diagnostics and Monitoring	\$2,055,554
Forestry	Génome Québec	Interim Review Completed	Mackay, John Bohlmann, Joerg	SMarTForests: Spruce Marker Technologies for Sustainable Forestry	\$4,880,948
GE ² LS	Genome Prairie	In-Progress	Phillips, Peter Castle, David	Value Addition to Genomics and GE ² LS (VALGEN)	\$2,553,659
Health	Genome British Columbia	In-Progress	Taylor, Michael Malkin, David Marra, Marco	Stratifying and Targeting Pediatric Medulloblastoma Through Genomics	\$4,847,669
Health	Genome British Columbia	In-Progress	Livingstone, Angus Muzyka, Daniel	Genomics Research Entrepreneurship to Accelerate Translation (GREAT)	\$408,788
Health	Genome British Columbia	In-Progress	Sorensen, Poul	The Canadian Pediatric Cancer Genome Consortium	\$773,121
Health	Genome Alberta	In-Progress	Cairncross, Gregory	Modeling and Therapeutic Targeting of the Clinical and Genetic Diversity of Glioblastoma	\$612,000
Health	Ontario Genomics Institute	In-Progress	McKerlie, Colin Brown, Steve	NorCOMM2 - In vivo models for human disease & drug discovery	\$4,900,000
Health	Ontario Genomics Institute	In-Progress	Sidhu, Sachdev Boone, Charles	Synthetic antibody program: novel therapeutics and reagents	\$4,849,415
Health	Ontario Genomics Institute	In-Progress	Dick, John	Development of Highly Active Anti-Leukemia Stem Cell Therapy Project	\$11,500,000
Health	Ontario Genomics Institute	In-Progress	Mak, Tak	Therapeutic Opportunities to Target Tumor Initiating Cells in Solid Tumors	\$2,500,000
Health	Ontario Genomics Institute	In-Progress	Snowdon, Anne	Accelerating Genomic Innovation in Life-Science Enterprises (AGILE)	\$243,000
Health	Ontario Genomics Institute	In-Progress	Boycott, Kim	Finding of Rare Disease Genes in Canada	\$1,679,744
Health	Génome Québec	In-Progress	Garant, Denis	Boosting Entrepreneurial Skills and Training: BEST in Genomics	\$401,442
Health	Genome Atlantic	In-Progress	McMaster, Christopher Fernandez, Conrad	Identifying New Genes and Medicines for the Treatment of Orphan Diseases (IGNITE)	\$2,393,299
Centres	Program Management Fees				\$4,232,838
TOTAL					\$133,052,091

Science & Technology Innovation Centres

SECTOR	CENTRE	STATUS	STIC LEADER(S)	PROJECT TITLE	TOTAL GC CONTRIBUTION
Science and Technology Innovation Centres	Genome British Columbia	In-Progress	Marra, Marco Jones, Steven Holt, Rob	Genome Sciences Centre (GSC)	\$6,626,905
Science and Technology Innovation Centres	Genome British Columbia	In-Progress	Borchers, Christoph	Genomics Innovation Centre (GIC) at the BC Cancer Agency Genome Sciences Centre	\$3,421,831
Science and Technology Innovation Centres	Genome Alberta	In-Progress	Wishart, David Borchers, Christoph	The Metabolomics Innovation Centre (TMIC)	\$1,329,332
Science and Technology Innovation Centres	Ontario Genomics Institute	In-Progress	Scherer, Stephen	The Centre for Applied Genomics (TCAG)	\$5,123,653
Science and Technology Innovation Centres	Génome Québec	In-Progress	Lathrop, Mark	McGill University and Genome Québec Innovation Centre	\$7,553,027
Centres	Program Management Fees				\$291,500
TOTAL					\$24,346,248

International Consortium Initiatives

SECTOR	CENTRE	STATUS	PROJECT LEADER(S)	PROJECT TITLE	TOTAL GC CONTRIBUTION
Environment	Ontario Genomics Institute	In-Progress	Hebert, Paul	International Barcode of Life Project (IBOL)	\$2,445,000
Health	Ontario Genomics Institute	In-Progress	Edwards, Aled	Structural Genomics Consortium III	\$5,000,000
Health	Génome Québec	In-Progress	Knoppers, Bartha Maria	Public Population Project in Genomics - bridging	\$476,603
Centres	Program Management Fees				\$55,000
TOTAL					\$7,976,603

Genome Centre Base Funding — Operations

GENOME CANADA delivers its mandate by funding and managing large-scale, interdisciplinary, and internationally peer-reviewed research projects, and S&T Innovation Centres. This is achieved by working with our primary partners: the six Genome Centres. The relationship between Genome Canada and each Genome Centre is defined by means of a funding agreement that not only acknowledges the independence of each Centre, but also specifies the ways in which each Centre contributes to Genome Canada's overall mandate. The Genome Centres play significant roles in fostering regional expertise in genomics research, developing partnerships to strengthen regional leadership and competitiveness, facilitating access to the S&T Innovation Centres, creating unique and innovative public outreach programs, and most importantly, by working with the projects, securing co-funding for projects from both domestic and international investors.

SECTOR	CENTRE	STATUS	PRESIDENT /CEO	TOTAL GC CONTRIBUTION
Centre Operations	Genome British Columbia	In-Progress	Winter, Alan	\$1,760,000
Centre Operations	Genome Alberta	In-Progress	Bailey, David	\$1,469,600
Centre Operations	Genome Prairie	In-Progress	Pontarollo, Reno	\$1,469,600
Centre Operations	Ontario Genomics Institute	In-Progress	Poznansky, Mark	\$1,760,000
Centre Operations	Génome Québec	In-Progress	Lepage, Marc	\$1,760,000
Centre Operations	Genome Atlantic	In-Progress	Armstrong, Steve	\$1,469,600
TOTAL				\$9,688,800

NOTES

on Governance

Genome Canada is governed by a Board of Directors comprising up to 16 independent members, representative of the academic, private, and public sectors, who are elected to serve a two-year term. As well, the presidents of five federal research agencies — the Canada Foundation for Innovation (CFI), Canadian Institutes of Health Research (CIHR), National Research Council (NRC), Natural Sciences and Engineering Research Council (NSERC), and Social Sciences and Humanities Research Council (SSHRC) — are non-voting, ex officio advisors to the Board of Directors.

THE GENERAL leadership and stewardship of Genome Canada falls under the purview of the Board of Directors.

The Board's fiduciary responsibilities extend to strategic planning, risk mitigation, performance and evaluation, financial planning and management. A number of permanent committees assist the board in fulfilling its obligations: namely, an Executive Committee, Audit and Investment Committee, Governance, Election and Compensation Committee, and Programs Committee. As well, the Board has a Science and Industry Advisory Committee that provides strategic advice to contribute to the corporation achieving its objectives of excellence and leadership in genomics research, and in

ethical, environmental, economic, legal, and social issues relating to this research in Canada.

The Board of Directors operates within a governance framework defined by the organization's letters patent, its general bylaws, the funding agreements with Industry Canada, its strategic plans, and its policies and procedures. Their actions are guided by a standard of conduct, as outlined in Genome Canada's conflict of interest policy. Best practices with respect to governance have been embedded in a codified handbook of standards and guidelines to be observed by Genome Canada directors, officers, and managers in their functions and in the decision-making process.

Number of meetings held by the board and its committees in 2012-13:

Board of Directors 6

Audit and Investment Committee 4

Governance, Election and Compensation Committee 4

Programs Committee 5

Science and Industry Advisory Committee 3

as of March 31, 2013
GenomeCanada

Board of Directors

Lorne Hepworth
 (Chairman)
 President,
 CropLife Canada
 Ottawa, Ontario

Prabhat D. (Pete) Desai
 (Vice-Chairman)
 President,
 Desai & Desai Inc.
 Calgary, Alberta

Abdallah Daar
 Professor,
 Public Health Sciences and
 Surgery
 University of Toronto
 Toronto, Ontario

Sylvie Dillard
 Past President,
 Conseil de la science
 et de la technologie
 Québec, Québec

René Douville
 Managing Director,
 National Client Group,
 RBC Royal Bank
 Montreal, Quebec

Peter Harder
 Senior Policy Advisor,
 Fraser Milner Casgrain LLP
 Ottawa, Ontario

Yvan Hardy
 Panel Member,
 International Resource Panel
 for Sustainable Resource
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Pierre Meulien
 President and CEO,
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Robert Orr
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 Slanmhor Pharmaceutical Inc.
 Bedford, Nova Scotia

Stephen W. Scherer
 Director,
 The Centre for Applied
 Genomics
 and McLaughlin Centre
 The Hospital for Sick Children
 and University of Toronto

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 Associate Director,
 The Genome Center
 Professor of Genetics,
 Washington University
 St. Louis, Missouri

Barbara Wold
 Bren Professor of Microbiology,
 California Institute of
 Technology
 Pasadena, California

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 President,
 Canadian Institutes of Health Research
 Ottawa, Ontario

John R. McDougall
 President,
 National Research Council of Canada
 Ottawa, Ontario

Suzanne Fortier
 President,
 Natural Sciences and Engineering
 Research Council of Canada
 Ottawa, Ontario

Chad Gaffield
 President,
 Social Sciences and Humanities
 Research Council of Canada
 Ottawa, Ontario

Gilles G. Patry
 President and CEO,
 Canada Foundation for Innovation
 Ottawa, Ontario

Officers of the Organization

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 Chairman, Board of Directors

Prabhat D. (Pete) Desai
 Vice-Chairman

Jean Brunet
 Secretary
 Stein Monast L.L.P.

Cindy Bell
 Executive Vice-President,
 Corporate Development

Guy D'Aloisio
 Vice-President, Finance

Carol Anne Esnard
 Chief Administrative Officer

Pierre Meulien
 President and CEO

Dale Patterson
 Vice-President, External Affairs

Karl Tibelius
 Vice-President, Genomics Program

Science and Industry Advisory Committee

Jacques Simard
 Professor,
 Canada Research Chair in
 Oncogenetics
 Faculty of Medicine
 Université Laval
 CHU de Québec Research Centre
 Quebec City, Quebec

Anne-Christine Bonfils
 Research Program Manager,
 Program and Project Services
 National Research Council
 of Canada
 Ottawa, Ontario

W.L. (Bill) Crosby
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 Department of Biological Sciences
 University of Windsor
 Windsor, Ontario

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 Pacific Biopharma Associates, LLC
 Chapel Hill, NC, USA

Joseph R. Ecker
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 Plant Molecular and Cellular
 Biology Laboratory
 Salk Institute for Biological
 Sciences
 La Jolla, CA, USA

Edna Einsiedel
 Professor,
 Communication Studies
 Faculty of Communication
 and Culture
 University of Calgary
 Calgary, AB

Stacey B. Gabriel
 Co-Director,
 Genome Sequencing and
 Analysis Program
 Broad Institute of MIT and
 Harvard
 Cambridge, MA, USA

Eric M. Meslin
 Ph.D., Professor of Medicine,
 Medical and Molecular
 Genetics, and Philosophy
 Indiana University School
 of Medicine
 Indianapolis, Indiana, USA

Jean Weissenbach
 Director,
 Centre National de
 Séquençage
 Paris, France

Paul A. Willems
 Technology Vice-President,
 Energy Biosciences, BP Group
 Associate Director,
 Energy Biosciences Institute
 UC Berkeley
 Berkeley, CA, USA

Genome Canada Staff

Pierre Meulien
 President and CEO

Naveed Aziz
 Director,
 Technology Programs

Cindy Bell
 Executive Vice-President,
 Corporate Development

Genny Cardin
 Analyst

Kim Corbett
 Program Manager

Mallory Dunlop
 Administrative Assistant

Guy D'Aloisio
 Vice-President, Finance

Karen Dewar
 Director,
 Genomics Programs

Carol Anne Esnard
 Chief Administrative Officer

Samantha Evans
 Director, Evaluation

Lorna Jackson
 Program Manager

Megan Jardine
 IM/IT Manager

Stephanie McDuff
 Administrative Assistant

Hélène Meilleur
 Director,
 Events and Sponsorships

Karine Morin
 Director,
 National GE³LS Program

Dale Patterson
 Vice-President,
 External Relations

Kate Swan
 Associate Director,
 Genomics Programs

Normand Therrien
 Finance Officer

Karl Tibelius
 Vice-President,
 Genomics Programs

Brigitte Vaillant
 Executive Assistant to the
 President and CEO

STATEMENT of remuneration

Total Compensation

Including fees, benefits and allowances for employees whose compensation exceeds \$100,000

Directors

Directors are not compensated for regular Board and Committee duties.

Officers

The following individuals are officers of Genome Canada and receive total compensation, including fees, allowances and other benefits, which fall within the following compensation ranges:

Cindy Bell, Executive Vice-President, Corporate Development	\$207,448 - \$280,550
Guy D'Aloisio, Vice-President, Finance	\$186,280 - \$241,366
Carol Anne Esnard, Chief Administrative Officer	\$156,984 - \$207,943
Jacques Guerette, Vice-President, Communications (until Dec. 2012)	\$157,000 - \$204,795
Pierre Meulien, President and CEO	\$280,000 - \$383,388
Dale Patterson, Vice-President, External Affairs	\$207,466 - \$267,892
Karl Tibelius, Vice-President, Genomics Programs	\$190,869 - \$250,283

Employees

The following individuals are employees of Genome Canada whose total compensation, including fees, allowances and other benefits, fall within the following compensation ranges:

Naveed Aziz, Director, Technology Programs	\$125,000 - \$151,774
Karen Dewar, Director, Genomics Programs	\$135,476 - \$166,443
Samantha Evans, Director, Evaluation	\$95,000 - \$114,040
Hélène Meilleur, Director Events and Sponsorships	\$124,480 - \$153,468
Karine Morin, Director, National GE ³ LS Program	\$107,310 - \$128,647
Marlene Orton, Director, Communications (until Dec. 2012)	\$93,500 - \$112,259
Kate Swan, Associate Director, Genomics Programs	\$94,311 - \$106,535
Normand Therrien, Finance Officer	\$105,615 - \$120,388



Management **DISCUSSION**

Since the creation of Genome Canada in 2000, the federal government has formally committed \$1.04 billion to the corporation for the purpose of supporting genomics research. The most recent federal budget of March 2013 announced a further \$165 million in funding for Genome Canada for research funding activities beginning in 2014. Through formal funding agreements with Industry Canada, funds are provided to support the regional Genome Centres, large-scale research projects, Science and Technology Innovation Centres, and the operations of Genome Canada.

ALL RESEARCH PROJECTS supported by Genome Canada through federal investments are required to be co-funded with other parties, including provinces, universities, the private sector, and other national and international organizations. As at March 31, 2013, more than \$1.1 billion in co-funding commitments has been raised.

A rigorous competitive process determines which research projects and S&T Innovation Centres throughout Canada will be funded. Projects are selected through a system of peer review that includes an assessment of the scientific merit of the proposal, the socio-economic benefits, and a concurrent due diligence review of the proposed management structure, the proposed budget and related financial data, including co-funding. The regional Genome Centres are also subject to regular independent external assessments. Reviewers are chosen for their recognized expertise in the science and management of large-scale genomics/proteomics projects, as well as knowledge of socio-economic impacts of research outcomes, and are drawn primarily from the international scientific community to avoid conflict of interest. Genome Canada's Board of Directors makes the final decision on which proposals to fund, based on recommendations received from the international panel of reviewers.

Guided by the terms and conditions of the funding agreements with each of the six Genome Centres, Genome Canada disburses funds to each for approved projects and S&T Innovation Centres. In turn, each Centre directs the funds to individual projects and S&T Innovation Centres located within its region. Genome Canada also contributes to the funding of base operations of the Genome Centres.

Financial Highlights 2012–13

In the year ending March 31, 2013, Genome Canada dispersed a total of \$55.9 million for both its own operations and for the funding of projects, S&T Innovation Centres and Genome Centres, down 12 percent from \$63.8 million in fiscal 2011-12.

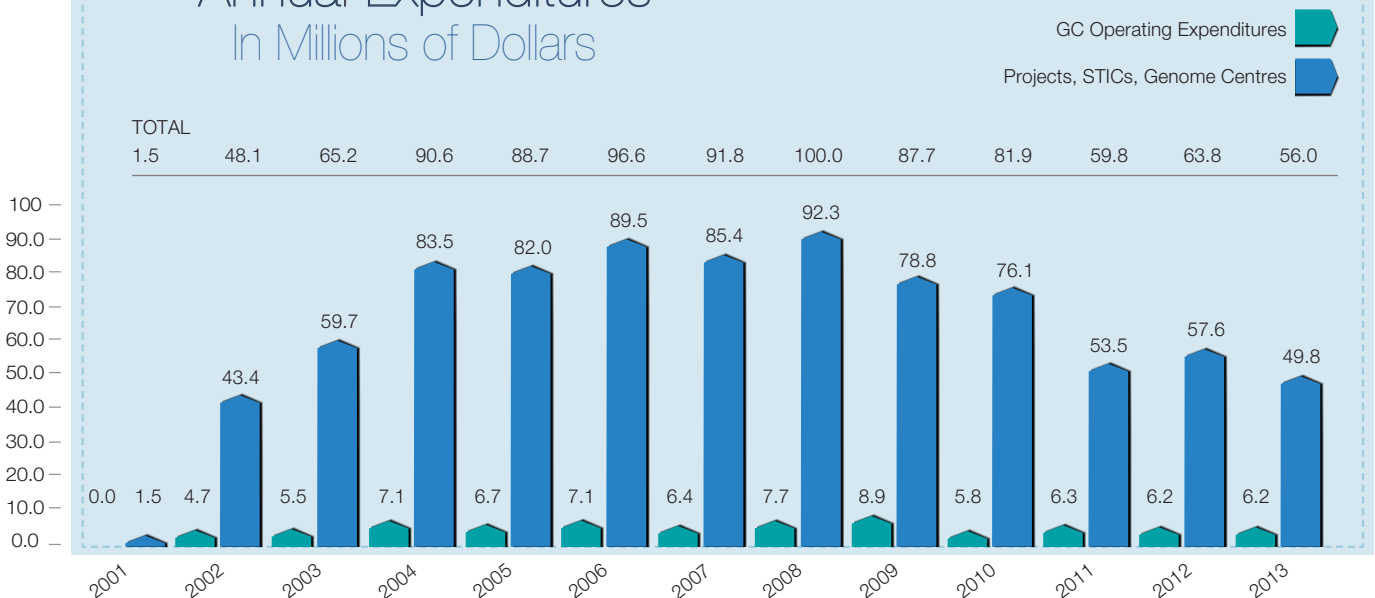
Operations

- Genome Canada's cost of operations totals \$6.2 million of which 55.2 percent relates to salaries and benefits that support operational activities in the areas of administration, program management, corporate development and fundraising, communications, governance, and workshops and symposia.

Projects, STICs and Genome Centres

- From inception to March 31, 2013, Genome Canada disbursements for research projects, S&T Innovation Centres, and regional Genome Centre operations total \$853.1 million.
- From total disbursements of \$49.8 million in fiscal year 2012-13, \$33.9 million was in support of research projects, \$11.0 million for the S&T Innovation Centres, and \$4.8 million for base funding of the regional Genome Centres.
- As of March 31, 2013, a total of \$43.0 million remains as deferred contributions, representing disbursements that will be made in subsequent years for Genome Canada operations and for approved research projects and S&T Innovation Centres.
- Through the combined efforts of Genome Canada, Genome Centres, and project leaders, it is estimated that more than \$1.1 billion in co-funding has been raised and committed from inception to March 31, 2013, bringing the total committed value of investments in genomics and proteomics research through Genome Canada funded projects and initiatives to over \$2 billion.

Annual Expenditures In Millions of Dollars



Outlook

2013-2014

Deferred contributions of \$43.5 million as of March 31, 2013, are committed to research projects approved through previous competitions and are scheduled for disbursement in 2013-14 and subsequent years.

The federal budget of March 2013 announced additional funding of \$165 million for Genome Canada for research funding activities beginning in fiscal year 2014-15. The Genome Canada **Strategic Plan 2012-17** will be used as the guiding document for the effective investment of these funds.

Funding from Industry Canada is provided to Genome Canada in annual installments based on estimated cash requirements for the year. Under currently active funding agreements, an amount of \$57 million is estimated to be received in 2013-14 to finance already approved research projects and operations.

Science that
powers Innovation
that powers Canada



Deloitte LLP
800 - 100 Queen Street
Ottawa ON K1P 5T8
Canada

Tel: (613) 236-2442
Fax: (613) 236-2195
www.deloitte.ca

Independent Auditor's Report

To the Directors of
Genome Canada

We have audited the accompanying financial statements of Genome Canada, which comprise the statement of financial position as at March 31, 2013, and the statements of operations and changes in net assets and of cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with Canadian accounting standards for not-for-profit organizations, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

Independent Auditor's Report (Continued)

Auditor's Responsibility (Continued)

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements present fairly, in all material respects, the financial position of Genome Canada as at March 31, 2013, and the results of its operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

Comparative Information

Without modifying our opinion, we draw attention to Note 2 to the financial statements and the fact that Genome Canada adopted Canadian accounting standards for not-for-profit organizations on April 1, 2012, with its transition date being April 1, 2011. These standards have been applied retrospectively by management to comparative figures included in these financial statements, including the statements of financial position as at March 31, 2012 and April 1, 2011 and the statements of operations and changes in net assets and of cash flows for the year ended March 31, 2012, including the accompanying notes. We were not engaged to report on the comparative figures and as such, they have not been audited.



Chartered Professional Accountants, Chartered Accountants
Licensed Public Accountants

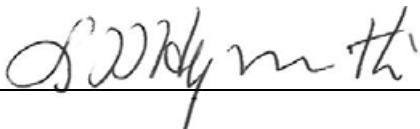
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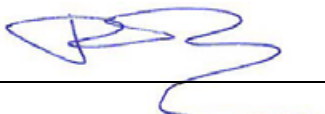
GENOME CANADA
Statement of Financial Position
as at March 31, 2013

	March 31, 2013	March 31, 2012	April 1, 2011
		(Unaudited) (Note 2)	(Unaudited) (Note 2)
CURRENT ASSETS			
Cash and cash equivalents (Note 4)	\$ 28,659,538	\$ 17,577,494	\$ 12,203,605
Interest receivable	272,536	171,370	291,392
Other receivables	125,335	78,537	147,508
Prepaid expenses	384,419	132,682	142,609
	29,441,828	17,960,083	12,785,114
INVESTMENTS (Note 5)	14,166,072	13,175,093	26,373,510
CAPITAL ASSETS (Note 6)	35,217	51,028	78,703
	\$ 43,643,117	\$ 31,186,204	\$ 39,237,327
LIABILITIES			
Accounts payable and accrued liabilities	\$ 633,476	\$ 643,585	\$ 704,996
Government remittances payable	712	223	3,613
Deferred contributions (Note 7)	42,973,712	30,491,368	38,450,015
Deferred contributions related to capital assets (Note 8)	35,217	51,028	78,703
	43,643,117	31,186,204	39,237,327
COMMITMENTS (Note 11)			
CONTINGENCIES (Note 12)			
NET ASSETS			
	\$ 43,643,117	\$ 31,186,204	\$ 39,237,327

See accompanying Notes to financial statements

ON BEHALF OF THE BOARD


 _____ Director


 _____ Director

GENOME CANADA

Statement of Operations and Changes in Net Assets year ended March 31, 2013

	<u>2013</u>	<u>2012</u> (Unaudited) (Note 2)
Revenues		
Amortization of deferred contributions (Note 7)	\$ 55,922,132	\$ 63,773,625
Amortization of deferred contributions related to capital assets (Note 8)	15,811	26,596
	<u>55,937,943</u>	<u>63,800,221</u>
Expenses		
Contributions to Centres and approved projects	49,769,412	57,639,894
General and administrative	4,596,588	4,538,732
Programs	581,929	252,235
Communications and external relations	498,711	825,321
Corporate development	372,387	161,189
Governance	98,485	147,663
Amortization of capital assets	15,811	26,596
Workshops and symposia	4,620	208,591
	<u>55,937,943</u>	<u>63,800,221</u>
EXCESS OF REVENUES OVER EXPENSES, BEING NET ASSETS, END OF YEAR	\$ -	\$ -

See accompanying Notes to financial statements

GENOME CANADA
Statement of Cash Flows
year ended March 31, 2013

	2013	2012
		(Unaudited) (Note 2)
NET INFLOW (OUTFLOW) OF CASH AND CASH EQUIVALENTS RELATED TO THE FOLLOWING ACTIVITIES:		
OPERATING		
Excess of revenues over expenses	\$ -	\$ -
Items not affecting cash		
Amortization of capital assets	15,811	26,596
Gain on disposal of capital assets	-	(721)
Change in fair value of investments	(56,234)	(1,825,381)
Amortization of deferred contributions (Note 7)	(55,922,132)	(63,773,625)
Amortization of deferred contributions related to capital assets (Note 8)	(15,811)	(26,597)
Excluded from the increase in deferred contributions (Note 10)	(1,170,950)	(728,026)
	(57,149,316)	(66,327,754)
Interest received on investments	1,674,260	1,563,026
Grants received from Government of Canada (Note 7)	67,800,000	55,100,000
Deferred contributions related to capital assets (Note 8)	-	(1,078)
Change in operating assets and liabilities		
Decrease (increase) in other receivable	(46,798)	68,971
Decrease (increase) in prepaid expenses	(251,737)	9,927
Decrease in accounts payable and accrued liabilities	(10,109)	(61,410)
Increase (decrease) in government remittances payable	489	(3,391)
	12,016,789	(9,651,709)
INVESTING		
Purchase of investments	(57,871,020)	(13,516,200)
Proceeds on disposal of investments	56,936,275	28,539,998
Proceeds on disposal of capital assets	-	1,800
	(934,745)	15,025,598
NET CASH AND CASH EQUIVALENT INFLOW	11,082,044	5,373,889
CASH AND CASH EQUIVALENTS, BEGINNING OF YEAR	17,577,494	12,203,605
CASH AND CASH EQUIVALENTS, END OF YEAR	\$ 28,659,538	\$ 17,577,494

See accompanying Notes to financial statements

GENOME CANADA

Notes to the Financial Statements

year ended March 31, 2013 and 2012

1. DESCRIPTION OF THE BUSINESS

Genome Canada (the "Corporation") was incorporated on February 8, 2000 under the Canada Corporations Act as a not-for-profit organization and has the following objectives:

- (a) The development and establishment of a co-ordinated strategy for genomics research to enable Canada to become a world leader in areas such as health, agriculture, environment, forestry and fisheries;
- (b) 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;
- (c) The support of large-scale projects of strategic importance to Canada by bringing together industry, government, universities, research hospitals and the public;
- (d) 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
- (e) The encouragement of investment by others in the field of genomics research.

2. ADOPTION OF A NEW ACCOUNTING FRAMEWORK

On April 1, 2012, the Corporation adopted the accounting standards for not-for-profit organizations (the "new standards") issued by the Canadian Institute of Chartered Accountants ("CICA") as set out in Part III of the CICA Handbook. The Corporation also applies the standards for private enterprises in Part II of the CICA Handbook to the extent that Part II addresses topics not addressed in Part III. In accordance with Section 1501 of the CICA Handbook, *First-time adoption by not-for-profit organizations* ("Section 1501"), the date of transition to the new standards is April 1, 2011 and the Corporation has prepared and presented an opening statement of financial position at the date of transition to the new standards. This opening statement of financial position is the starting point for the Corporation's accounting under the new standards. In its opening statement of financial position, under the recommendations of Section 1501, the Corporation:

GENOME CANADA

Notes to the Financial Statements

year ended March 31, 2013 and 2012

2. ADOPTION OF A NEW ACCOUNTING FRAMEWORK (Continued)

- recognized all assets and liabilities whose recognition is required by the new standards;
- did not recognize items as assets or liabilities if the new standards do not permit such recognition;
- reclassified items that it recognized previously as one type of asset, liability or component of net assets, but are recognized as a different type of asset, liability or component of net assets under the new standards; and
- applied the new standards in measuring all recognized assets and liabilities.

In accordance with the requirements of Section 1501, the accounting policies set out in Note 3 have been consistently applied to all years presented and adjustments resulting from the adoption of the new standards have been applied on a retrospective basis. The Corporation has not applied any exemptions available under Section 1501.

The adoption of this new financial reporting framework has no impact on the previously reported statement of financial position as at April 1, 2011, as at March 31, 2012, or on the previously reported statements of operations and changes in net assets and of cash flows for the year ended March 31, 2012, except for the separate disclosure of government remittances, which was previously reported under accounts payable and accrued liabilities. Comparative figures have been restated to reflect this separate disclosure.

3. SIGNIFICANT ACCOUNTING POLICIES

The financial statements have been prepared in accordance with Canadian accounting standards for not-for-profit organizations and include the following significant accounting policies:

Cash and cash equivalents

Cash and cash equivalents consist of cash as well as highly liquid short-term investments. The Corporation considers highly liquid short-term investments as those having a maturity of less than three months from the date of acquisition. Cash and cash equivalents are recorded at fair value.

GENOME CANADA

Notes to the Financial Statements

year ended March 31, 2013 and 2012

3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Revenue recognition

The Corporation follows the deferral method of accounting for contributions for not-for-profit organizations, which include grants from the Government of Canada.

Externally restricted contributions and related investment income are recognized as revenue in the year in which the underlying expenses are incurred. A receivable is recognized if the amount to be received can be reasonably estimated and collection is reasonably assured.

Externally restricted contributions for purchase of capital assets are deferred and amortized to revenues on a declining balance-basis at a rate corresponding to the amortization rate for the related capital assets.

Receivables

Interest receivable and other receivables are recorded at amortized cost.

Investments

Investments are recorded at fair value. Fair value is determined at quoted market prices. Sales and purchases of investments are recorded at the settlement date. Transaction costs related to the acquisition of investments are expensed.

Capital assets

Capital assets are stated at their net book value. Amortization is provided for using the declining-balance method at the following annual rates:

Furniture and fixtures and office equipment	20%
Computers and software	50%
Telecommunication equipment	30%

Accounts payable and accrued liabilities and government remittances payable

Accounts payable and accrued liabilities and government remittances payable are recorded at amortized cost.

GENOME CANADA
Notes to the Financial Statements
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3. SIGNIFICANT ACCOUNTING POLICIES (Continued)

Pension plan

The Corporation maintains, for the benefit of almost all of its employees, a defined contribution pension plan. The cost of the plan is recorded in the statement of operations as it is incurred. The charge for the year totals \$208,025 (2012 - \$184,394).

Use of estimates

The preparation of financial statements in conformity with Canadian accounting standards for not-for-profit organizations requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Accordingly, actual results could differ from these estimates. The most significant estimates used in the preparation of the financial statements include the fair value of investments, the amount of accrued liabilities and the estimated useful lives of capital assets. These estimates are reviewed annually and as adjustments become necessary, they are recorded in the financial statements in the year in which they become known.

4. CASH AND CASH EQUIVALENTS

	March 31, 2013	March 31, 2012	April 1, 2011
	<u> </u>	(Unaudited) (Note 2)	(Unaudited) (Note 2)
Cash	\$ 3,977,618	\$ 677,760	\$ 110,128
Short-term investments	24,681,920	16,899,734	12,093,477
	<u>\$ 28,659,538</u>	<u>\$ 17,577,494</u>	<u>\$ 12,203,605</u>

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5. INVESTMENTS

	<u>2013</u>	
	<u>Fair Value</u>	<u>Cost</u>
Provincial government bonds	\$ 7,579,488	\$ 7,846,800
Corporate bonds and debentures	6,586,584	6,604,145
	\$ 14,166,072	\$ 14,450,945
	<u>2012</u>	
	<u>Fair Value</u>	<u>Cost</u>
	(Unaudited) (Note 2)	
Government of Canada bonds	\$ 11,670,513	\$ 11,974,500
Corporate bonds and debentures	1,504,580	1,541,700
	\$ 13,175,093	\$ 13,516,200
	<u>2011</u>	
	<u>Fair Value</u>	<u>Cost</u>
	(Unaudited) (Note 2)	
Government of Canada bonds	\$ 20,560,172	\$ 20,756,700
Corporate bonds and debentures	5,813,338	7,783,298
	\$ 26,373,510	\$ 28,539,998

The interest rates at the end of the year range from 4.45% to 8.75% (2012 - 4.00% to 4.55%; April 1, 2011 - 1.52% to 5.15%) and maturity dates vary from May 12, 2013 to October 3, 2018 (2012 - May 7, 2012 to December 15, 2012; April 1, 2011 - November 15, 2011 to October 12, 2036).

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6. CAPITAL ASSETS

	March 31, 2013			
	Cost	Accumulated Amortization	Net Book Value	
Furniture and fixtures and office equipment	\$ 180,044	\$ 155,471	\$ 24,573	
Computer and software	203,374	194,440	8,934	
Telecommunications equipment	32,134	30,424	1,710	
	\$ 415,552	\$ 380,335	\$ 35,217	
				March 31, 2012
	Cost	Accumulated Amortization	Net Book Value (Unaudited) (Note 2)	April 1, 2011 Net Book Value (Unaudited) (Note 2)
Furniture and fixtures and office equipment	\$ 180,044	\$ 149,328	\$ 30,716	\$ 39,474
Computer and software	203,374	185,505	17,869	35,739
Telecommunications equipment	32,134	29,691	2,443	3,490
	\$ 415,552	\$ 364,524	\$ 51,028	\$ 78,703

Cost and accumulated amortization at March 31, 2011 amounted to \$502,187 and \$423,484, respectively.

7. DEFERRED CONTRIBUTIONS

The Corporation receives grants from the Government of Canada to be held, invested, administered and disbursed in accordance with the related funding agreement between Genome Canada and the Government of Canada.

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7. DEFERRED CONTRIBUTIONS (Continued)

The Corporation currently operates under four active funding agreements with Industry Canada. The terms and conditions of these agreements call for payments to be made to the Corporation annually, subject to the appropriation by Parliament, at the beginning of each fiscal year, based on the estimated cash requirements for the coming year. During the year ended March 31, 2013, the Corporation received \$35,700,000 under the agreement dated March 31, 2008, \$25,900,000 under the agreement dated March 31, 2010, \$2,400,000 under the agreement dated January 3, 2012 and \$3,800,000 under the agreement dated January 29, 2013. The changes in the deferred contributions balance for the year are as follows:

	<u>2013</u>	<u>2012</u> (Unaudited) (Note 2)
Balance, beginning of year	\$ 30,491,368	\$ 38,450,015
Add: grants received	67,800,000	55,100,000
Add: investment income	604,476	713,900
Add (less): amounts invested in capital assets	-	1,078
Less: amounts amortized to revenue	<u>(55,922,132)</u>	<u>(63,773,625)</u>
Balance, end of year	<u>\$ 42,973,712</u>	<u>\$ 30,491,368</u>

8. DEFERRED CONTRIBUTIONS RELATED TO CAPITAL ASSETS

Deferred contributions related to capital assets represent restricted contributions with which capital assets were originally purchased. The changes in the deferred contributions balance for the year are as follows:

	<u>2013</u>	<u>2012</u> (Unaudited) (Note 2)
Balance, beginning of year	\$ 51,028	\$ 78,703
Less: disposal of capital assets	-	(1,078)
Less: amounts amortized to revenue	<u>(15,811)</u>	<u>(26,597)</u>
Balance, end of year	<u>\$ 35,217</u>	<u>\$ 51,028</u>

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9. CAPITAL MANAGEMENT

The Corporation defines capital as its deferred contributions.

The Corporation's objectives in managing capital are to safeguard its ability to continue as a going concern and pursue its strategy of promoting genomics research by funding eligible projects that meet the mandate and criteria of its funder, the Government of Canada, and provide benefits to other stakeholders. Management continually monitors the impact of changes in economic conditions on its investment portfolio and its funding commitments. There were no changes to the Corporation's approach to capital management during the year.

10. SUPPLEMENTAL CASH FLOW INFORMATION

	<u>2013</u>	<u>2012</u>
		(Unaudited) (Note 2)
Loss on disposal of investments	\$ (1,211,014)	\$ (553,729)
Amount transferred from (to) capital assets	-	1,078
Fair value adjustment	<u>40,064</u>	<u>(175,375)</u>
	<u>\$ (1,170,950)</u>	<u>\$ (728,026)</u>

11. COMMITMENTS

Committed funding

The Corporation is committed to finance approved research projects, science and technology platforms and Genome Centre operations in accordance with established agreements. As at March 31, 2013, the payments committed are approximately \$45,826,020 in 2014 and \$36,352,641 for other future years.

Consulting

The Corporation has entered into three consulting agreements expiring at various dates in the 2014 fiscal year. The payments committed amount to \$163,080 in 2014.

GENOME CANADA

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11. COMMITMENTS (Continued)

Operating leases

The Corporation leases its premises and equipment under long-term operating leases, which expire at various dates between 2014 and 2017. The minimum aggregate lease payments are approximately as follows:

2014	\$ 143,577
2015	9,245
2016	9,245
2017	3,958

12. CONTINGENCIES

In the normal course of business, the Corporation has entered into a lease agreement for premises. It is common in such commercial lease transactions for the Corporation as the lessee, to agree to indemnify the lessor for liabilities that may arise from the use of the leased assets. The maximum amount potentially payable under the foregoing indemnities cannot be reasonably estimated. The Corporation has liability insurance that relates to the indemnifications described above.

13. FAIR VALUE OF FINANCIAL INSTRUMENTS

The carrying value of interest receivable, other receivables, accounts payable and accrued liabilities and government remittances payable approximates their fair value because of the relatively short period to maturity of the instruments.

The fair value of investments is disclosed in Note 5 to the financial statements.

The Corporation is not subject to significant currency risk arising from its financial instruments. The Corporation is exposed to credit and interest rate risk with respect to its interest-bearing investments. The Corporation diversifies its investments to reduce the credit risk to an acceptable level.



We would like to thank the
Government of Canada for
its continued support.



GenomeCanada





GenomeCanada

150 Metcalfe Street, Suite 2100
Ottawa, ON K2P 1P1

www.genomecanada.ca