Genome BritishColumbia
Leading ▸ Investing ▸ Connecting

ANNUAL REPORT 2020–2021

ADAPTING

TO THE

FUTURE

We acknowledge that Genome BC's office is located on unceded traditional territories of the Coast Salish peoples, including the territories of the xʷməθkwəyəm (Musqueam), Səl̓ilwətaʔ/Selilwitulh (Tsleil-Waututh) and Skwxwú7mesh (Squamish) Nations. We are honoured to perform the important work of Genome BC on these lands.

TABLE OF CONTENTS

ADAPTING TO THE FUTURE

Overcoming a challenge builds resiliency in all of us. The seismic shifts and disruptions from the current pandemic have reverberated around the globe. Very quickly, people had to collectively accept this new reality and adapt—we had to rethink plans and adjust, including the very nature of the way we work.

There is an old saying that could not be more true in these challenging times—start by doing what's necessary; then do what's possible; and suddenly you are doing the impossible. Like many organizations, Genome BC adapted business practices in compliance with public health orders. Working from home meant transforming living quarters into home offices, adjusting to diminished personal interactions with our colleagues, dealing with the uncertainty brought on by a rapidly evolving news cycle—all while feeling anxiety for loved ones near and far. And despite the uncertainty of not knowing how long we would have to live and work under these circumstances, our team collectively sought to find a structure and rhythm that would enable us to do our best work.

Many activities throughout this year provided opportunities for Genome BC to demonstrate the agile and creative elements of our work—harnessing the passion of our people, their skills, experience, knowledge, and insights—tapping into their resources and networks to identify and seize opportunities at the right time and in the right way. Ultimately, we were able to leverage the unique flexibility we have as an organization to take more risks than might be possible within other agencies.

During a pandemic, speed and agility to mobilize resources, including research, is essential for the public health response. In early February 2020, Genome BC funded an initiative led by British Columbia's Centre for Disease Control (BCCDC) Public Health Laboratory, to incorporate genomic analysis into tracking the virus, adding a critical new dimension to its outbreak response capabilities. This was followed by the launch of the Rapid Response Funding program, designed to support projects based on their ability to address the most pressing questions in the fight against COVID-19 and demonstrate impacts quickly.

As the Genome BC team worked to help mobilize resources in response to COVID-19, we also continued to manage our existing portfolio—coordinating with researchers to determine how the pandemic would impact research activities already underway. The public health orders impacted the ability of

"Leadership in health research improves the lives of British Columbians, ensures the safety and sustainability of our health-care system. In fact, BC's COVID-19 response relies strongly on a policy approach anchored in science, assisted through long-time partnerships with Genome BC and other research institutions."

The Honourable Adrian Dix, M.L.A.
Minister of Health, Province of British Columbia

teams to continue their research, complete progress, and financial reports, or to publish research results as planned. Throughout the year, our team found themselves managing a record number of projects. We adapted by doing what was necessary; we moved on to what was possible and by the end of the year accomplished more than we could have imagined under the current circumstances.

This past year was a watershed moment for genomics—this transformational science clearly demonstrated its value. From the earliest days of the pandemic genomics was critical to the public health response. Whole genome sequencing from around the world contributed to the development of diagnostic tools, treatment and vaccines in record time. Genomics facilitated the tracking of the SARS-CoV-2 virus, its origins, and how it spread not only internationally, but throughout our communities. And genomics informed us on variants and how the virus evolves.

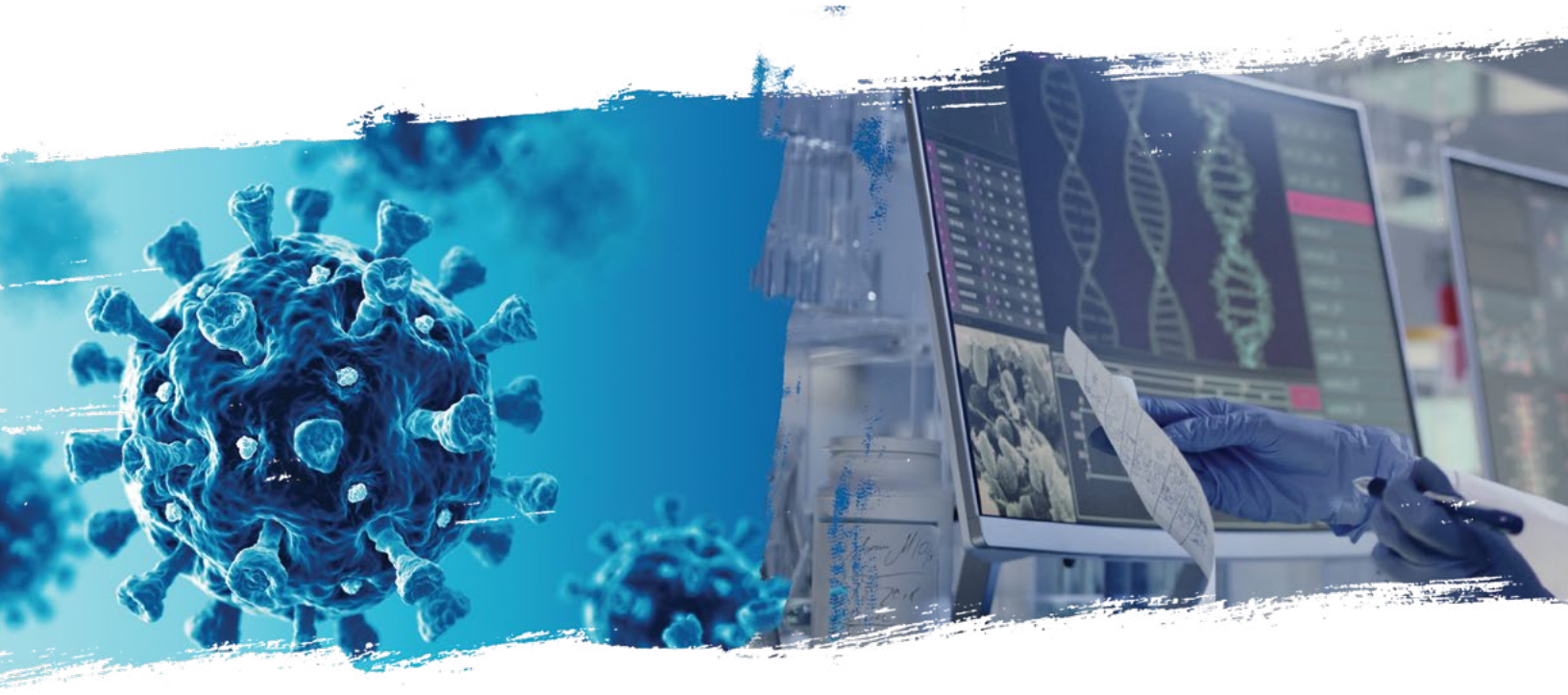
Epidemiology, mRNA, sequencing, mutations, and variants have become household terms—the public has learned the role genomics plays in public health and health care. And in the months and years to come, as the virus is likely to shift from pandemic to endemic, genomics will continue to aid in decision making and play a vital role in shaping public health policy.

This year has also demonstrated the importance of a thriving and innovative life sciences sector. The ecosystem responded quickly to mitigate public health risk, helping to inform policies that reduced case numbers in BC, worked diligently on therapeutics and treatment and often pivoted to address gaps in personal protective equipment (PPE) innovation and production.

Building a thriving life sciences sector has always been a pursuit of passion for Genome BC. Our success is based on addressing future pressing social and economic needs and challenges facing British Columbians. Our investments will continue to bridge academia, industry and government with knowledge discovery and applications that solve societal and economic challenges.

This reaches far beyond human health. Without safe and secure food and water sources people cannot thrive. Through the responsible application and uptake of genomics Genome BC will help translate research into innovative new tools to assist BC's food producers and natural resource stewards to improve the health of our ecosystem and advance a sustainable and competitive resource-based economy. By focusing on food security, renewable resources and resilient ecosystems we will promote growth and productivity while prioritizing ecosystem health, and yielding creative solutions for an equitable, greener and more competitive resource-based economy in British Columbia.

ADAPTING TO IMPROVE HEALTH OUTCOMES



As news of a novel coronavirus and the urgent threat it presented began to emerge, the BCCDC's ability to incorporate genomic analysis into tracking the virus gave our province an immediate advantage in our response to the outbreak.

In the weeks following, the number of cases grew at an alarming pace—more than anyone could have predicted. Identifying where a case originated became important to understanding sources and patterns within the transmission. Sequencing data helped differentiate between cases and informed how best to respond to this emergency, ultimately benefiting public health and the residents of BC.

Following the BCCDC's success, facilitated through our funding, Genome BC launched a COVID-19 Rapid Response Funding Program to fund promising research and innovation projects with the realistic potential to have a material impact within six months on

"Genomics allowed pandemic response within a week of our first identified case. Early support from Genome BC allowed us to track SARS-CoV-2 transmission to quickly show which strains affected British Columbians and what public health measures could help interrupt transmission to prevent spread. This use of genomics has contributed to public health policy aimed at keeping British Columbians as safe as possible."

Dr. Mel Krajden
Medical Director, BCCDC Public Health Laboratory

evolving COVID-19 related challenges. By leveraging Genome BC's ability to respond quickly to emerging issues and connect with researchers, scientists and innovators, the COVID-19 Rapid Response Program was designed and implemented within two weeks—providing rapid funding for research and innovation projects with the real potential to address urgent challenges related to the pandemic. Within a few days, the program had received 185 proposals.

The Rapid Response Program leveraged Genome BC's extensive internal expertise in research and innovation to review project submissions based on their individual merit and criteria including time to impact, significance of impact, ratio of funding to impact and originality of the work or complementarity to ongoing work. Genome BC leveraged its existing relationships with the research community, BCCDC, BC Public Health Office and the BC COVID-19 Strategic Research Advisory Council (SRAC) to seek clarification and additional information to ensure alignment with evolving needs and better understand the BC and Canadian research ecosystems.

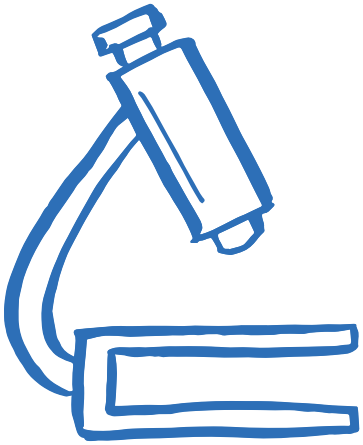
As a result of this expedited approach, researchers were able to launch projects sooner, leading to realistic potential to have a fast and material impact on evolving COVID-19 related challenges in BC. Funded projects reflect a diverse set of scientific research and innovation initiatives, from developing antibody-based therapies, to securing reagents to scale up COVID-19 testing in BC, to sanitizing respirator masks to protect health care workers.

To date Genome BC has provided over $3 million in funding to 24 projects, fulfilling unmet, immediate needs that have and will dramatically define the way that our province responds to this pandemic. Funding is primarily focused on delivering short-term impacts, but is also intended to complement longer term, larger funding opportunities.

"Genomic epidemiology is really leading edge work. This is the first time that we've been able to rapidly sequence genomes to help us understand the trajectory of the pandemic in a very short period of time."

Dr. Bonnie Henry
Chief Provincial Health Officer,
Province of British Columbia

From the outset of this crisis, Genome BC, along with Genome Canada and other Canadian genomic enterprise partners, worked proactively with governments and researchers to mobilize a coordinated response to the national—and global—SARS-CoV-2 emergency. Genomics data became one effective tool in the containment and management of this threat.



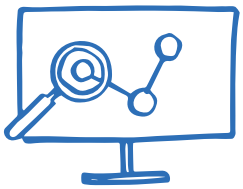
The Canadian COVID Genomics Network (CanCOGeN) is committed to generating accessible and usable genomics data to inform public health and policy decisions, as well as to guide treatment and vaccine development. In addition to providing critical information to guide the current public health and policy response to COVID-19, CanCOGeN provides data for outbreak analysis and is poised to use the data to study cases of reinfection as well as to support post-vaccination surveillance. Beyond COVID-19, CanCOGeN is helping build the capacity and infrastructure for a much-needed national genomics and health data platform in preparation of future crises.

CanCOGeN

The Canadian COVID Genomics Network (CanCOGeN) is a Genome Canada-led consortium of Canadian federal, provincial and regional public health authorities and healthcare partners, academia, industry, hospitals, research institutes and large-scale sequencing centres.

Sequencing up to 150,000 viral genomes

Sequencing up to 10,000 host genomes



Coordinating data analysis and sharing

Building genomics lab capacity across Canada

"Viruses are oblivious to borders, so developing effective public health strategies requires similarly unbounded access to data. The initiatives under CanCOGeN provide a much-needed step forward for Canada, deepening support to national and international genomic surveillance efforts and public health decision making."

Dr. Catalina Lopez-Correa
Executive Director, CanCOGeN,
Genome Canada

VirusSeq

Sequencing up to 150,000 viral samples from people testing positive for COVID-19. This will provide key data on virus transmission trends and changes that may impact viral detection or the effectiveness of treatments or vaccines.

HostSeq

Sequencing the genomes of up to 10,000 patients diagnosed with COVID-19. This work will help answer why in some instances the severity (and even the lethality) of the virus in the senior population is sometimes lower than among young healthy people.

"It's easy to lose perspective on how far we've come since the SARS outbreak in 2003, where it was the Michael Smith Genome Science Centre that was the first to sequence the virus. This ability was due to early investments in genomics and technology. It was not an easy thing to do back then, but it was insightful.

Through investments from Genome BC and others, AbCellera was formed ahead of technology that could contribute to this pandemic and future events. It is so important to have a vibrant sector in science that works between academia, government and the private sector, so that we're in a position to move more quickly when situations like this emerge."

Dr. Carl Hansen
Director and CEO, AbCellera Biologics Inc.

We are fortunate to have a world class research community in our province. BC's strong life sciences ecosystem has shown how well it can adapt to a crisis, responding quickly and effectively to emerging issues. In addition to its collective contribution to the current pandemic, genomics has proven to be an effective tool in detecting other threats to public health, such as avian influenza and norovirus. These events have demonstrated the strong capabilities of our research ecosystem and are a reminder that while remarkable science is our foundation, great people have fuelled our impact.

The COVID-19 pandemic has shown in a dramatic way that science, research, and innovation must not be an afterthought—they are essential to the well being and success of our province. While our province has excelled in discovery and application, there remains an opportunity to further support the translation of research innovations into commercial success, thus helping promising BC-based companies grow, while generating returns that benefit all British Columbians. Jurisdictions around the world with strong and growing life science sectors include 'anchor companies' as an essential ingredient to attract talent and the capital investment that grow the local ecosystem. Genome BC has worked hard to help build this capacity within our province by investing in people and businesses to develop, attract and retain world-class talent and intellectual property. Companies such as AbCellera and Precision NanoSystems Inc. are homegrown success stories that have been years in the making. The key now is to ensure that established life science companies like them—as well as promising early-stage businesses—are supported, not only for the contributions they make to BC's economy, but also for their contribution to our preparedness for future public health emergencies.

Genome BC began investing in platform technology for single cell analysis led by Dr. Carl Hansen, who headed up the bioengineering program at the University of British Columbia in 2008. We have since championed his research and technology development over 12 years through eight innovative programs, contributing $15 million (nearly $5 million from Genome Canada and over $3 million from Genome BC, which attracted an additional $7 million in co-funding) towards the evolution and company growth of AbCellera Biologics Inc. Today, AbCellera is one of BC's highest valued companies, worth $15.7 billion.

Photo Credit: AbCellera

ENTREPRENEURSHIP AND COMMERCIALIZATION

It is not enough to have strong leaders in science. Business savvy and an entrepreneurial mindset are paramount to innovation and scaleup. As a facilitator, Genome BC helps foster collaboration between academia and industry, builds networks and attracts co-investment. To date we have helped advance 121 companies, supported BC job growth, and contributed to international recognition of British Columbia for its genomics and life sciences capabilities. Some of the companies advanced through Genome BC's support of entrepreneurship and commercialization include:

AbCellera

ACUVA

ALAViDA

ANANDIALABS

Aspect biosystems

AugureX

BOREAL GENOMICS

ContextualGenomics

GenXys Health Care Systems

MRM Proteomics

PRECISION NANOSYSTEMS

Sonic Incytes

Starling

"Genome BC provided critical initial and continued funding for our early technology development. Precision NanoSystems is now a global leading provider of technology solutions for the development and manufacturing of genetic medicines, including RNA vaccines and therapeutics"

Dr. James Taylor
CEO and Co-Founder,
Precision NanoSystems Inc.

EMBRACING THE ONE HEALTH APPROACH

The COVID-19 pandemic has revealed just how fragile we are—not just as a province or as a nation, but as a global community. More than 3.8 million[1] people worldwide have died from COVID-19 and more than 177 million cases have been recorded as we compile this report. And while some countries are turning the corner, others are facing a different reality; the virus continues to mutate, further increasing the risk of widespread infections in vulnerable populations. The threat remains real for us all—continued community transmissions and health systems under pressure.

[1] COVID-19 deaths as of June 17, 2021 https://coronavirus.jhu.edu/map.html

[2] https://www.cdc.gov/onehealth/basics/zoonotic-diseases.html

"There is a need to better understand the interplay between animal and human pathogens and genomics can play a valuable role. This technology has proven to be a powerful surveillance tool as demonstrated through Genome BC's support of key projects such as avian influenza, antimicrobial resistance, and COVID-19 in mink. Genomics helps us better identify risks to human health and agriculture and develop strategies to defend against them."

Dr. David Patrick
Director of Research, BCCDC

The encroachment of civilization is pushing nature to its limits by destroying and degrading diverse ecosystems, ultimately removing natural buffers, and expanding the interface between wildlife and people where pandemics emerge. Scientists estimate that more than six out of every 10 known infectious diseases in people can be spread from animals, and three out of every four new or emerging infectious diseases in people come from animals.[2] In addition to COVID-19, diseases like influenza, Salmonella, and norovirus are examples of zoonotic diseases—diseases that can be shared between animals and people.

No one person, organization, or sector can address issues at the animal-human-environment interface alone. The "One Health" approach is a collaborative, multisectoral, and transdisciplinary approach—working at the local, regional, national, and global levels—with the goal of achieving optimal health outcomes. Its foundation is the recognition that the health and wellbeing of humans, animals and the environment are intricately linked. By promoting collaboration across all sectors, a One Health approach can achieve the best health outcomes for people, animals, and plants in a shared environment. While it's not a new concept, it has become more important in recent years because of the changing interactions between people, animals, plants, and our environment.

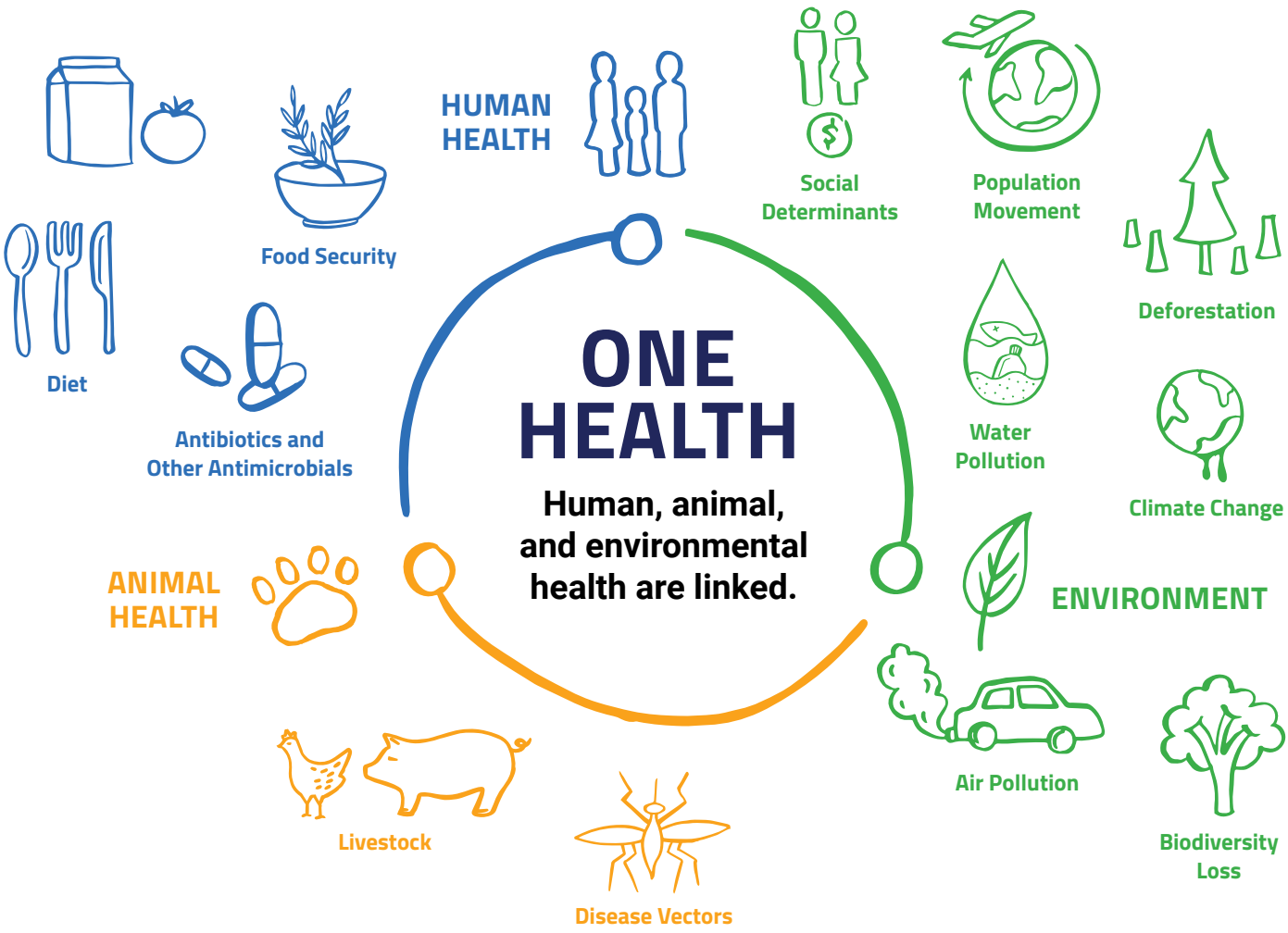
Genome BC is keen to foster a greater understanding of this interplay between animal and human pathogens and its impacts across sectors such as human health, agriculture, and the environment—identifying where there are opportunities for genomic solutions.

Through our funding of specific One Health projects such as SARS, norovirus, avian influenza, and COVID-19 in mink, the goal is to provide powerful cross-disciplinary surveillance tools to help identify and mitigate risks to human health and agriculture and defend against them.

"Despite the zoonotic origins of SARS-CoV-2, there has been relatively little investment in "One Health" surveillance in animal hosts such as mink. It is critical that we build the tools and collaborations to address One Health issues, particularly as global warming and urbanization continue to be growing issues."

Dr. Natalie Prystajecky
Program head for the Environmental Microbiology program,
BCCDC Public Health Laboratory

Genome BC's One Health work supports the development of a coordinated and collaborative approach to combat infectious diseases that travel from humans from animals. It draws upon BC's expert scientific and sector capacity to improve the health and well being of animals, people, and their environment to strengthen BC's health, population, environment, and agriculture sectors.



The associated factors are not exhaustive, they are examples as there are many elements to consider.
Source: ISGlobal

MONITORING ANIMAL HEALTH AND COVID-19

When the SARS-CoV-2 virus replicates there is potential for mutation, not only within the human population, but also within animal populations that interact with humans. Farmed mink are of particular interest since they are highly susceptible to SARS-CoV-2 and, in Europe, have also been shown to transmit the virus back to humans.

The transmission of the virus to and from mink has created a specific opportunity to pilot a One Health project, overcoming both scientific and collaborative challenges to address current and future threats.

The project will develop novel genomic surveillance of SARS-CoV-2 within mink as a critical dimension of managing this pandemic and building preparedness for the emergence of future viruses.

The One Health approach is inherently difficult not only due to logistical reasons such as sampling and transport, but also institutional challenges. This project focuses on the development and refinement of shared diagnostic protocols for the detection of COVID-19 in animal reservoirs. These protocols will facilitate the surveillance of future emerging infectious diseases and a collective approach to dealing with them.

The project team is a cross governmental One Health unit including key leaders from BC's Ministry of Health (through the BCCDC) and BC's Ministry of Agriculture, Food and Fisheries. Together the group can respond to the threat of viral transmission between human and mink, and build the necessary capacity, knowledge, and interagency collaboration required to effectively address zoonotic One Health threats.

"This project is an expansion of the ongoing collaboration between the Animal Health Centre and the BC Centre for Disease Control, BC's provincial animal and human diagnostic laboratories. We are building toward a truly integrated model for detecting and monitoring emerging infectious diseases—a model that will enable the province to be better prepared to deal with infectious disease threats, both now and in the future. This will undoubtedly result in efficiencies and innovations that will allow our team to better serve the people of British Columbia."

Dr. Chelsea Himsworth
Leader for Veterinary Science and Diagnostics, British Columbia Ministry of Agriculture, Food and Fisheries

ADAPTING TO PRESERVE THE ENVIRONMENT

Our province is rich in natural resources and intellectual capital. We know that innovation is a key component in bringing together those economic pillars. We also know that the responsible stewardship of our resource sectors is essential to environmental stability today and in the future. Our resources sectors are under increasing pressure to adapt, mitigate and act in the face of climate change and a growing global population. Genomics offers new and disruptive ways of addressing some of these challenges to alleviate environmental stresses.

The agrifoods and natural resource sectors already have a rich history of applying genomic tools to existing challenges. Genome BC and Genome Canada have been investing in genomic tools, resources, and policies for more than two decades. To date, we have applied this knowledge to identify which trees should be planted today for more resilient forests in the future. We have identified tools to monitor and manage at-risk species including goshawks, grizzly bears, and beluga whales and to invasive species such as Asian longhorned beetle and Asian gypsy moth.

"Genomics is a critical tool for managing BC's environment. With this innovation we are now able to make evidence-based decisions not only in the detection of threats, but also in proactive planning for the future."

James Mack
Assistant Deputy Minister, Ministry of Environment & Climate Change Strategy

Novel methods to mitigate mine remediation and biosolids are being developed and applied in real-time. For instance, the ability to measure environmental DNA (eDNA) in soil communities enables more precise measurements of soil biodiversity. This increases our understanding of the soil microbiome and its capacity to adapt, evolve and contribute to mine reclamation. This in turn allows accurate environmental assessments at mine sites leading to healthier more productive soils overall. Environmental assessment is a critical step in evaluating the health of reclaimed mine sites, and is vital to the local community, because it has direct implications for human and environmental health.

The development of a reference encyclopedia, or DNA library, for all known freshwater fish species in BC, both native and invasive, is also underway. This will enable scientists to confidently use eDNA tools to develop an accurate species list for sampled areas and ensure full traceability of data. This reference library will become a trusted foundational resource that government managers and First Nations can rely on for regulatory and enforcement purposes.

Genomics has the potential to support provincial and national goals through the development of innovative, accessible and applicable tools to ensure Canada's biodiversity.

The Government of Canada has committed to protecting 25% of Canada's land and oceans by 2025 and working toward 30% by 2030. These efforts will be grounded in science, Indigenous knowledge and local perspectives and will continue to support partnerships with provinces and territories, municipalities, and Indigenous communities across the country.

FOOD FOR THE FUTURE

Climate change, land use, environmental sustainability, plant and animal health are all serious challenges facing BC's agrifoods sector. The sector also faces increased market competition through globalization. However, these challenges offer opportunities to advance innovation and competitiveness to those who can address them.

Genome BC is catalyzing partnerships and knowledge transfer, increasing sector sustainability and competitiveness to exploit new business opportunities to drive the agrifoods sector. By consulting with stakeholders not only in BC's agrifoods sector but across Canada, Genome BC is working to understand how genomics can maximize economic and social benefits. And BC researchers have already demonstrated that genomics can support competitive domestic and international markets for BC's agrifoods products:

"Investment in agritech is the key to unlock the power of nature, enabling farmers to grow more food with less chemicals, and ensure higher yields with fewer pests. We appreciate Genome BC's continued support, enabling us to further our mission of ensuring an earth that thrives and provides for everyone."

Dr. Steve Slater
Vice President, Strategic Initiatives, Terramera

- Routine molecular testing for plant viruses is time consuming, laborious and requires individual analysis for each species. By using next generation sequencing, plant breeders and nurseries can detect all viruses present in a single plant sample, including those not routinely tested. This will ensure plants shipped abroad are virus-free and will keep markets open for fruit and crops from BC and Canada.

- Infectious diseases are a leading cause of illness in livestock and result in direct economic losses to producers and potentially disastrous international trade restrictions. As mentioned earlier in this report, there is also the potential for direct transfer of disease from animals to people. Managing and monitoring zoonotic diseases is essential for a healthy planet.

- The use of new breeding approaches involving genomic selection will enable the development of hardier plants better adapted to future provincial climate challenges without loss of plant yield. Sunflower is an ideal model system for studying plant adaptation to climate change. By investigating the molecular and physiological basis of wild sunflower's adaptations to stress, breeders will be able to transfer these stress resistance traits to elite sunflower cultivars and use similar approaches in other agriculturally important crops.

For the agrifoods sector to remain internationally competitive and environmentally sustainable in the long term, it is imperative to diversify and adopt innovative technologies that will allow our province to deliver unique products for a local and global market. Today, Genome BC's foundational investment in genomics applications in agrifoods, combined with ongoing international research, is driving the next stage of translational research in all areas of food production and processing.

MAKING GENESKOOL A HOMESKOOL

Photo Credit: Cindy Goodman

When BC's public schools closed in March 2020 in response to the COVID-19 pandemic, it was clear that even when in-class learning resumed, deploying volunteers to deliver in-class workshops was likely not an option for the foreseeable future. Genome BC's education team immediately went to work converting Geneskool™ activities and workshops to online and remote learning resources. In less than a month, all Geneskool program materials were converted and available through Genome BC's website, as well as the BC Government's Keep Learning page (www.openschool.bc.ca) as a science resource for high school students. To supplement these resources, our team hosted webinars with educators to provide training and support for these tools.

"We are very grateful that Genome BC offered this real-world learning to our students. Being able to have hands on experiences, that are so connected to what is happening in our world right now, brings learning to such a deep level. These experiences change lives and empower our students to work on the challenges our communities currently face."

Robyn Gray
Superintendent, Cowichan Valley School District

Genome BC also hosted its first ever educator retreat—four days to learn more about the rapidly advancing field of genomics and how it intersects with society. Geneskool facilitators, BC based researchers and educators were able to reflect on personal perceptions of genetics and genomics, engage in meaningful discussion and establish two-way dialogue over how best to advance genomic literacy with BC students in grades nine through 12.

The retreat was an opportunity to examine how Geneskool's content could be used to approach 'Big Ideas' in the BC's curriculum and to help students find relevance between their own lives and genomic sciences.

The pandemic provided a unique opportunity to rethink our popular Summer Science Program to a fully online and virtual experience. This immersive two week camp has participants explore aspects of genomics, inheritance, forensics and microbiology in pursuit of solving a mystery.

Once the mystery narrative was adapted for the virtual classroom, science kits with tools for blood typing, microscopy, chromatography and other hands-on activities were assembled and shipped to participating students. Live online instruction was provided through face-to-face video classrooms throughout the 10-day event. The virtual format provided most of the elements of the in-person program—guest speakers, guided hands-on experiments and working with other students (albeit through virtual breakout rooms) to solve the mystery.

This format also provided a unique opportunity to expand Geneskool's summer program beyond the lower mainland by offering a self directed format where students had access to all the online content from wherever they call home.

This year, the education team also produced a new workshop called Outbreak, designed to teach students genomic epidemiology skills. Epidemiologists help us to understand where infectious diseases originate, how they spread and what strategies might help to mitigate their negative impacts. In this workshop, students solve a fictional case using real-world epidemiological tools to compare DNA sequences and to create a phylogenetic tree. Analyzing this information reveals how viruses can spread through a community. Students utilize the same genomic tools that are deployed to monitor and mitigate the spread of the SARS-CoV-2. Applying their knowledge of DNA and mutation to this simulated outbreak allows students to experience the value of genetics to everyday life.

This new workshop was tested with 2,586 girls as part of the online Girls and STEAM event at Science World and is now the first bookable virtual classroom offered by Geneskool. Over 400 students have been reached so far in Vancouver, Nelson, Lake Cowichan, Duncan, Fort Nelson, and Fort St. John.

Genome BC has always been an advocate of genomics education through outreach activities and remains committed to providing BC teachers and students with an opportunity to explore the world of genomics and genetics and apply learning to real world challenges.

"It's a blank canvas in genomics in secondary education; costs are no longer prohibitive and terms such as PCR and mRNA have become household terms. It's been invaluable to have Genome BC's Geneskool help navigate current and future possibilities in genomics."

Greg Munby
LV Rogers Secondary, Nelson BC

"Appreciate the volunteers time and willingness to share their backgrounds with students just beginning to wonder about what they will do after high school. Also, great to see this STEAM activity run by three females—great role models for our class."

James Cutt
Quamichan Middle School, Duncan, BC

GENESKOOL™

3,066
Students Engaged

164
Teachers Trained

1,516
Education Resource Downloads

466
Face to Face Volunteer Hours

51%
of all BC communities (cities, district municipalities, towns and villages) are reached by Genome BC programs*

*Total is cumulative since Genome BC's inception in 2000.

PUBLIC ENGAGEMENT / OUTREACH

695
Visitors to Corporate Events

121
Number of Unique Media Stories

71,385
Website Visitors

381,454
Media Views and Podcast Listens

5,886
Podcast Listens (within media views)

548,304
20 Genomics Facts Impressions

SOCIAL MEDIA HIGHLIGHTS

25,482
Followers

+9%
Growth in Followers

39,701
Engagements

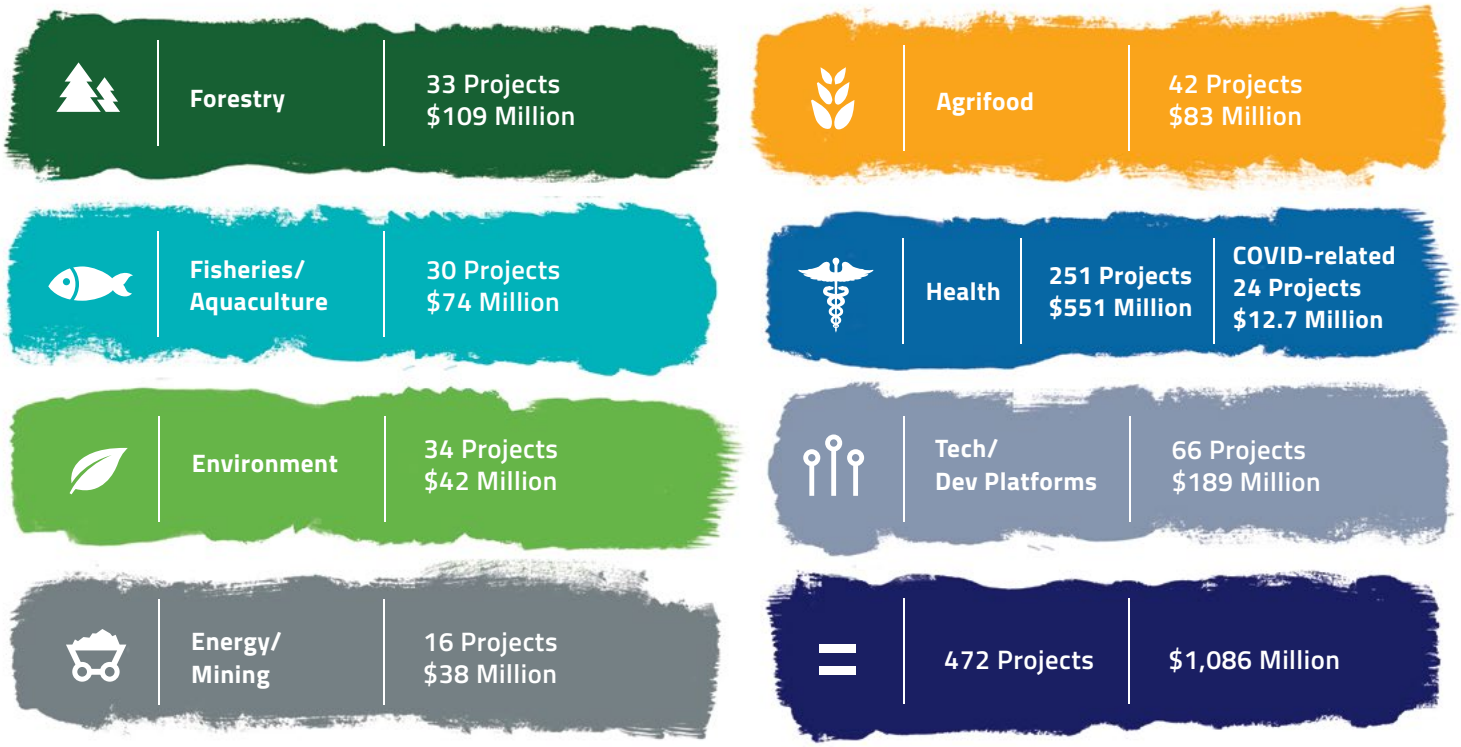
+62%
Growth in Engagements

All figures represent activities from April 1, 2020 to March 31, 2021 unless noted otherwise.

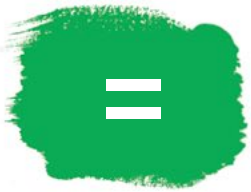
GENOME BC IMPACT / PROJECT PORTFOLIO NUMBERS

Since 2000, Genome BC has led genomics innovation on Canada's West Coast and facilitated the integration of genomics into society. Managing a cumulative portfolio of over $1.2 billion in 472 genomics research projects and science and technology platforms.

PROJECTS AND FUNDING



SOCIO-ECONOMIC IMPACT

Economic Impact to BC's GDP*	$2.6B			32,400	Jobs Created*
Companies Advanced	121			1,073	Partnerships
†Patent Applications	733			3,553	Scientific Publications
Co-investment Attracted	$917M			$1.2B	Total Investment
Applications/ Products/Services Demonstrated	101			12	COVID-related Applications/ Product/Services Demonstrated

Figures are cumulative as of March 31, 2021

† All countries including provisional

* Economic and Social Impact Analysis, MNP LLP, 2018

MESSAGE FROM THE PRESIDENT AND CEO

The COVID-19 pandemic put the spotlight on science and research unlike any other time in recent history. And the scientific response was and remains amazing. Life sciences allowed us to understand SARS-CoV-2 virus faster than any disease-causing organism ever before. Data science facilitated the exchange of information and unprecedented global collaboration among scientists. This allowed the development of vaccines in record time. Partnered with this, information technologies enabled a seamless shift to a virtual work environment. One technology however stands out—genomics.

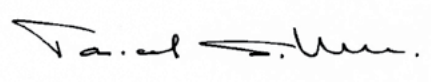
Genomic sequencing led to a deep understanding of the virus and allows for the tracking and surveillance of mutations and variants. Genomics informed immunologists' understanding of how our immune system builds defences against the virus. Genomics was essential for vaccine developers to produce new vaccines for clinical trials at record speed and the list goes on. Genomics will continue to play a prominent role in fighting the pandemic, monitoring the effectiveness of public health measures, adaptation of vaccines to variants and future pandemic preparedness.

Both the pandemic and the focus on genomics had a profound impact on Genome BC's year. Like everyone, we had to adapt our operations to online, we worked from home, met virtually and at the same time mobilized our resources to contribute to the scientific and public health response to COVID-19.

As mentioned earlier in this report, we launched our Rapid Response Funding Program to very quickly finance research and innovation projects with the aim of supporting the immediate response to COVID-19. In the following weeks and months, additional projects were identified to complement existing efforts in partnership with others, including Genome Canada. Throughout the year we worked closely with the BC Centre for Disease Control in support of British Columbia's Public Health Officer to ensure resources were available quickly and applied where they were needed most. Simultaneously, Canada's Genomics Enterprise, with the leadership of Genome Canada, demonstrated its ability to act nationally by creating CanCOGeN—a national/provincial collaborative virus surveillance program supporting provincial health laboratories and federal institutions.

Our team delivered these additional programs while looking after existing projects that were impacted by pandemic restrictions. In parallel we successfully competed in a Genome Canada's 2020 Large Scale Applied Partnership Program and the Genomic Applications Partnership Program, capturing 30% of all available Genome Canada funds, the highest per capita federal investment in the country. Overall, we were able to secure a total of $47.2 million in new co-funding for BC researchers across all sectors.

We have proven to be relevant and resilient when it counted the most and I can't thank my colleagues at Genome BC enough for their efforts and dedication and the empathy and support we provided one another during a very challenging year. Our board provided unwavering support, advice and most importantly encouragement. I am also grateful to our colleagues in the regional genome centres and at Genome Canada. Connecting and collaborating with them was instrumental in our success. Governments at every level faced enormous challenges and we are very thankful to the officials, both elected and unelected, in BC's provincial government for their hard work and continued support of Genome BC. We have great capacity and willingness to collaborate in British Columbia—this spirit was demonstrated daily over the past year and continues to be a differentiator for our ecosystem. Thank you to all our partners, stakeholders, and supporters.



PASCAL SPOTHELFER

MESSAGE FROM THE BOARD CHAIR

The response to the pandemic has shown that science can move remarkably fast when a crisis demands it. It took 12 days to identify and sequence the SARS-CoV-2 virus and less than a year to develop, test and approve approaches for treatment including multiple vaccines.

Here in British Columbia we are fortunate to work in a province that offers a unique, well integrated ecosystem. From the Ministry of Health, the Provincial Health Office, the health authorities, municipalities, researchers and funders, everyone has worked together with the BC Centre for Disease Control to collect evidence, analyze data and manage the pandemic. The Genome BC team can be immensely proud of their contribution to this collaborative effort.

Observing this organization over the years, I remain impressed with the effectiveness and responsiveness to strategic and emerging opportunities. When genomics can be applied to provide solutions, the organization mobilizes and prioritizes. As a catalyst for genomics research and innovation, Genome BC's strength has always been rooted in the ability to connect people and organizations. To bring a practical approach toward finding solutions to challenges that are important to British Columbians.

On behalf of the board, I applaud the efforts of the entire Genome BC team. The outstanding work and commitment of our people to work collaboratively across the ecosystem has always been critical to our success. This year was particularly exceptional. From the early funding for genomic analysis into tracking the virus, followed by a Rapid Response Funding initiative, to managing all the challenges of working from home and staying connected in a world trying to isolate, our team demonstrated dedication and resilience.

This is a testament to Genome BC's leadership who have worked collaboratively with staff to build a strong culture rooted in values that drive commitment and purpose—to facilitate the responsible adoption of genomics into society and drive BC's bioeconomy.

We are ever thankful to the Government of British Columbia, as well as other funding partners and stakeholders across the ecosystem for continued support and for recognizing the importance of the work we do. The trust imbued upon us over the years strengthens our resolve to ensure we continue to provide excellent value to the people of BC into the future.

JOHN SHEPHERD, MD FRCPC

INDEPENDENT AUDITORS' REPORT

TO THE BOARD OF DIRECTORS OF GENOME BRITISH COLUMBIA

OPINION

We have audited the financial statements of Genome British Columbia (the Entity), which comprise:

- the Statement of Financial Position as at March 31, 2021
- the Statement of Operations and Changes in Net Assets for the year then ended
- the Statement of Cash Flows for the year then ended
- and Notes to Financial Statements, including a summary of significant accounting policies

(hereinafter referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the financial position of the Entity as at March 31, 2021, and its results of operations and its cash flows for the year then ended in accordance with Canadian accounting standards for not-for-profit organizations.

BASIS FOR OPINION

We conducted our audit in accordance with Canadian generally accepted auditing standards. Our responsibilities under those standards are further described in the "*Auditors' Responsibilities for the Audit of the Financial Statements*" section of our auditors' report.

We are independent of the Entity in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada and we have fulfilled our other ethical responsibilities in accordance with these requirements.

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

OTHER INFORMATION

Management is responsible for the other information. Other information comprises the annual report.

Our opinion on the financial statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information identified above and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit and remain alert for indications that the other information appears to be materially misstated.

We obtained the information, other than the financial statements and the auditors' report thereon, included in the annual report as at the date of this auditors' report.

If, based on the work we have performed on this other information, we conclude that there is a material misstatement of this other information, we are required to report that fact in the auditors' report.

We have nothing to report in this regard.

RESPONSIBILITIES OF MANAGEMENT AND THOSE CHARGED WITH GOVERNANCE FOR THE FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of the 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.

In preparing the financial statements, management is responsible for assessing the Entity's ability to continue as a going concern, disclosing as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Entity's financial reporting process.

AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian generally accepted auditing standards will always detect a material misstatement when it exists.

Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with Canadian generally accepted auditing standards, we exercise professional judgment and maintain professional skepticism throughout the audit.

We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion.

  The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit 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.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Entity's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Entity to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

KPMG LLP

CHARTERED PROFESSIONAL ACCOUNTANTS
Vancouver, Canada
June 11, 2021

FINANCIAL STATEMENTS

Statement of Financial Position (Expressed in Canadian Dollars)
March 31, 2021, with comparative information for 2020

		2021		2020
Assets				
Current assets:				
Cash	**$**	**2,576,520**	$	928,104
Short-term investments (notes 3 and 4)		**92,414,490**		91,846,735
Funding receivable (note 3)		**15,000,000**		101,250
Other receivables (note 5)		**51,744**		45,631
Project advances		**4,844,414**		3,367,927
Prepaid expenses		**254,200**		109,879
		115,141,368		96,399,526
Capital assets (note 6)		**1,173,611**		184,517
	$	**116,314,979**	$	96,584,043
Liabilities and Net Assets				
Current liabilities:				
Accounts payable and accrued liabilities (note 7)	**$**	**8,184,740**	$	8,078,476
Deferred lease inducement		**–**		23,565
Deferred contributions:				
Future expenses (note 8)		**106,956,628**		88,297,485
Capital assets (note 9)		**1,173,611**		184,517
	$	**116,314,979**	$	96,584,043

Commitments (note 10)
See accompanying notes to financial statements.

Approved on behalf of the Board:

JOHN SHEPHERD, MD FRCPC
Director

LENARD F. BOGGIO
Director

Statement of Operations and Changes in Net Assets (Expressed in Canadian Dollars)
Year ended March 31, 2021, with comparative information for 2020

		2021		2020
Revenues:				
Amortization of deferred contributions related to future expenses (note 8)	**$**	**11,763,244**	$	41,988,046
Amortization of deferred contributions related to capital assets (note 9)		**111,549**		144,946
Recoveries from commercialization projects (note 4)		**15,788**		–
Investment income (loss) (note 3)		**21,366,497**		(5,432,837)
		33,257,078		36,700,155
Expenses:				
Corporate programs and management	**$**	**8,244,436**	$	8,145,571
Project expenditures		**24,901,093**		28,409,638
Depreciation		**111,549**		144,946
	$	**33,257,078**	$	36,700,155
Excess of revenues over expenses, being net assets, beginning and end of year	**$**	**–**	$	–

See accompanying notes to financial statements.

Statement of Cash Flows (Expressed in Canadian Dollars)
Year ended March 31, 2021, with comparative information for 2020

		2021		2020
Cash provided by (used in):				
Operations:				
Excess of revenues over expenses	**$**	**–**	$	–
Items not involving cash:				
Depreciation		**111,549**		144,946
Amortization of deferred contributions related to future expenses (note 8)		**(11,763,244)**		(41,988,046)
Amortization of deferred contributions related to capital assets (note 9)		**(111,549)**		(144,946)
Unrealized gain on short-term investments		**(15,542,493)**		10,215,535
		(27,305,737)		(31,772,511)
Funding (note 8)		**31,499,465**		13,941,532
Change in operating assets and liabilities:				
Funding receivable		**(14,898,750)**		(101,250)
Other receivables		**(6,113)**		(6,864)
Project advances		**(1,476,487)**		435,593
Prepaid expenses		**(144,321)**		(1,983)
Accounts payable and accrued liabilities		**106,264**		1,373,143
		(12,225,679)		(16,132,340)
Investments:				
Proceeds from sale of short-term investments		**20,752,703**		20,500,000
Purchase of short-term investments		**(5,777,965)**		(32,683,980)
Purchase of capital assets		**(1,100,643)**		(96,991)
		13,874,095		(12,280,971)
Increase (decrease) in cash		**1,648,416**		(28,413,311)
Cash, beginning of year		**928,104**		29,341,415
Cash, end of year	**$**	**2,576,520**	$	928,104

See accompanying notes to financial statements.

NOTES TO FINANCIAL STATEMENTS

1. Operations:

Genome British Columbia (the Corporation) was incorporated on July 31, 2000 under the Canada Corporations Act and continued under the Canada Not-For-Profit Corporations Act as a not-for-profit organization and is exempt from income and capital taxes. The Corporation has the following objectives:

(a) develop and establish a coordinated approach and integrated strategy in British Columbia to enable British Columbia to become a world leader in selected areas of genomic and proteomic research and innovation, including agriculture, aquaculture, environment, forestry and human health, among others, by bringing together universities, research hospitals, other research centres and industry, as well as government and private agencies for the benefit of British Columbia;

(b) participate in national approaches and strategies to strengthen genomics research capabilities in Canada for the benefit of all Canadians;

(c) maintain a genome centre in British Columbia to ensure that researchers can undertake research and development projects offering significant socio-economic benefits to British Columbia and Canada, to provide access to necessary equipment and facilities, and to provide opportunities for training of scientists and technologists;

(d) establish a contractual relationship with Genome Canada, and contractual and collaborative relationships with others (including private and voluntary sectors and federal and provincial governments) in order to provide financial and personnel resources for the Corporation;

(e) address public concerns about genomics research through the organization of intellectual resources regarding ethical, environmental, legal and societal issues related to genomics;

(f) increase public awareness of the need for genomics research and of the uses and implications of the results of such research, thereby helping Canadians understand the relative risks and rewards of genomics;

(g) leverage the organization's speed and agility to provide emerging issues funding that enables researchers and innovators to address previously unforeseen challenges in British Columbia; and

(h) support entrepreneurial, commercialization and innovation activities that help to grow the life sciences sector in British Columbia.

2. Significant accounting policies:

(a) Basis of presentation:
These financial statements have been prepared in accordance with Canadian Accounting Standards for Not-for-Profit Organizations (Accounting Standards for NPO's).

(b) Short-term investments:
Short-term investments are recorded at fair value with gains and losses recorded in the statement of operations and changes in net assets in the period in which they arise. Short-term investments are comprised of a portfolio of funds managed by investment professionals.

(c) Project advances:
Project advances are comprised of amounts provided by the Corporation to approved research projects and platforms, which have not yet been spent.

(d) Capital assets:
Capital assets are initially recorded at cost. Depreciation is provided using the straight-line method as follows:

Asset	Years
Furniture and fixtures	5
Computers and software	3
Telecommunications equipment	5
Project equipment	3 – 4
Leasehold improvements	Remaining lease term

(e) Revenue recognition:
The Corporation follows the deferral method of accounting for contributions.

Externally restricted contributions:
Deferred contributions related to expenses of future periods represent unspent externally restricted funding and related investment income, which are for the purposes of providing funding to eligible recipients and the payment of operating and capital expenditures in future periods. Externally restricted contributions for expenses of a future period and related investment income are deferred and recognized as revenue in the year in which the related expenses are incurred. Externally restricted contributions for the purchase of capital assets are initially recorded as deferred contributions related to future expenses, and transfer to and recorded as deferred contributions related to capital assets when the amounts have been spent on capital assets. Deferred contributions related to capital assets are amortized to revenue in the statement of operations and changes in net assets using the same methods and amortization rates of the related capital assets.

Unrestricted contributions:
Unrestricted contributions are recognized as revenue when received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured.

2. Significant accounting policies (continued):

(f) Commercialization projects:
The Corporation seeks to drive commercialization through partnerships with early stage companies. The Industry Innovation Program (the "Program") was established for the purpose of investing in companies involved in early stage research and development, where technologies have not yet reached commercialization. The value of any underlying security on these investments is limited. The Corporation expenses all amounts invested in these projects as advanced. Recovery of amounts invested are recorded as revenue when the funds are received or receivable if the amount to be received can be reasonably estimated and collection is reasonably assured. The Program balance consists of deferred contributions for investment, interest and royalties earned, gains less losses on investments and recoveries from investments less new investment.

(g) Use of estimates:
The preparation of financial statements requires the use of estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses. Areas requiring the use of management's estimates relate to the determination of accruals for project expenditures and the recoverable amounts of investments in commercialization projects. Accordingly, actual results could differ from these estimates.

(h) Valuation of long-lived assets:
Management reviews the carrying amount of capital assets for impairment whenever events or changes in circumstances indicate that the asset no longer contributes to the Corporation's ability to provide services, or that the value of future economic benefits or service potential associated with the asset is less than its carrying amount. If such conditions exist, an impairment loss is measured and recorded in the statement of operations and changes in net assets at the amount by which the carrying amount of the capital asset exceeds its fair value or replacement cost.

(i) Deferred lease inducement:
Tenant inducement received associated with leased premises is deferred and amortized on a straight-line basis over the term of the lease.

(j) Related foundation:
The financial information of Genome British Columbia Foundation, a not-for-profit entity that is commonly controlled by the Corporation, is not consolidated but is disclosed in these financial statements.

(k) Financial instruments:
Financial instruments are recorded at fair value on initial recognition. All financial instruments are subsequently measured at cost or amortized cost, unless management has elected to carry the instruments at fair value. The Corporation has elected to carry its short-term investments at fair value.

At period-end, the Corporation assesses whether there are any indications that a financial asset measured at cost or amortized cost may be impaired. Financial assets measured at cost include funding receivable and other receivables. If there is an indicator of impairment, the Corporation determines if there is a significant adverse change in the expected amount or timing of future cash flows from the financial asset. If there is a significant adverse change in the expected cash flows, the carrying value of the financial asset is reduced to the highest of the present value of the expected cash flows, the amount that could be realized from selling the financial asset or the amount the Corporation expects to realize by exercising its right to any collateral. If events and circumstances reverse in a future period, an impairment loss will be reversed to the extent of the improvement, not exceeding the initial impairment charge.

(l) Foreign exchange:
The Corporation's monetary assets and liabilities denominated in foreign currencies are translated into Canadian dollars using exchange rates in effect at the statement of financial position date. Revenue and expense items are translated at the rate of exchange prevailing on the date of the transaction. Foreign exchange gains and losses are included in the statement of operations and changes in net assets.

3. Short-term investments:

The Board of Directors has overall responsibility for the establishment and oversight of the Corporation's short-term investments. The Board has established an Investment Committee, which is responsible for developing and monitoring the Corporation's investment policy. The overall objectives of the Corporation's investment policy are to achieve security of principal that ensures a return of the capital invested, to maintain the liquidity necessary to meet the cash flow requirements of the Corporation and to maximize the rate of return without affecting liquidity or incurring undue risk.

The Corporation's short-term investments are comprised of a portfolio of funds and other investments. The portfolio consists of investments in fixed income funds and Canadian and international equity funds. The portfolio is managed by independent investment professionals in accordance with the Corporation's investment policy. All short-term investments are measured at fair value. The Corporation's short-term investments are subject to interest rate, market and liquidity risks.

Both the risk of significant changes in interest rates and the risk of significant changes in market prices are mitigated by the Corporation's policy that permits its portfolio managers to change the level of investment in the funds at short notice and the fact that interest earned on the portfolio is reinvested monthly at prevailing rates. The Corporation limits exposure to liquid asset credit risk through maintaining its short-term investments with high-credit quality financial institutions.

3. Short-term investments (continued):

The Corporation's short-term investments are as follows:

		2021		2020
Fixed Income Funds	**$**	**53,628,174**	$	52,716,541
Canadian and International Equity Funds		**38,786,316**		39,130,194
	$	**92,414,490**	$	91,846,735

The Fixed Income Funds invest in a mixture of bonds and debentures with a minimum average credit rating of BBB. The Canadian and International Equity Funds invest in a mixture of Canadian, U.S. and international equities. Fair values of the Corporation's portfolio investments are based on quoted bid price at the reporting date.

In April, 2021 the Corporation received funding of $15,000,000 from the Province of BC to support its mandate and strategic plan. These funds will be invested in accordance with the Corporation's investment policy.

The investment income (loss) is comprised of the following:

		2021		2020
Interest income	**$**	**5,362,403**	$	4,473,625
Realized gains		**440,353**		283,017
Unrealized gains (losses)		**15,542,493**		(10,215,534)
Other		**21,248**		26,055
	$	**21,366,497**	$	(5,432,837)

4. Industry Innovation Program:

		2021		2020
Balance, beginning of year	**$**	**9,518,312**	$	12,618,312
Recoveries from commercialization projects		**15,788**		–
Investments in commercialization projects		**(2,050,000)**		(3,100,000)
Balance, end of year	**$**	**7,484,100**	$	9,518,312

Year	Investment made (redeemed)		Amount advanced
2017	3	$	1,850,000
2018	3		2,162,500
2019	(1)		(500,000)
2019	2		1,500,000
2020	3		3,100,000
2021	4		2,050,000
	14	$	10,162,500

The program balance of $7,484,100 is included in deferred contributions and have been invested along with the Corporation's other short-term investments.

Investments in commercialization projects consist of loans which are secured by a general security interest in all assets of the companies. Interest accrues on the outstanding balances at prime plus 3% compounded annually. Repayment of principal and accrued interest over a two year period commences after the earlier of (a) an agreed annual gross revenue threshold; (b) a change of control of the company; or (c) a date that is four years from the date of the loan was advanced. The Company may also receive royalty and other payments contingent upon the success of the investee's commercialization efforts and the balance of the loan outstanding.

During the year ended March 31, 2021, an investee company was granted a one-year loan extension and is required to pay interest during the loan extension period on the outstanding principal at a rate of prime plus 5%. The investee company made its first interest payment of $15,788 in March, 2021.

5. Other receivables:

		2021		2020
Sales tax	**$**	**47,322**	$	27,935
Other accounts receivables		**4,422**		17,696
	$	**51,744**	$	45,631

6. Capital assets:

March 31, 2021	Cost	Accumulated depreciation	Net book value
Furniture and fixtures	**$ 277,382**	**$ 43,772**	**$ 233,610**
Computers and software	**389,559**	**198,216**	**191,343**
Telecommunications equipment	**21,273**	**11,477**	**9,796**
Leasehold improvements	**771,976**	**33,114**	**738,862**
	$ 1,460,190	**$ 286,579**	**$ 1,173,611**

March 31, 2020	Cost	Accumulated depreciation	Net book value
Furniture and fixtures	$ 123,039	$ 104,691	$ 18,348
Computers and software	304,548	187,488	117,060
Telecommunications equipment	21,273	8,824	12,449
Leasehold improvements	545,767	509,107	36,660
	$ 994,627	$ 810,110	$ 184,517

During the year ended March 31, 2021, fully amortized capital assets of $635,080 (2020 – $108,483) were removed from the Corporation's accounting records.

7. Accounts payable and accrued liabilities:

	2021	2020
Accounts payable	**$ 583,477**	$ 93,255
Accrued liabilities – projects	**6,578,289**	7,086,437
Accrued liabilities – others	**1,022,974**	898,784
	$ 8,184,740	$ 8,078,476

Included in accrued liabilities as at March 31, 2021 are government remittances payable of $26,424 (March 31, 2020 – $25,647) relating to payroll taxes and health taxes.

8. Deferred contributions related to future expenses:

The Corporation receives funding from Genome Canada, the Province of British Columbia and from other sources to be held, administered and distributed in accordance with the related funding agreements between the Corporation and other parties (note 10).

Deferred contributions related to expenses of future periods represent these unspent externally restricted funds, which are for the purposes of providing funding to eligible recipients and the payment of operating and capital expenditures in future periods. The changes in the deferred contributions balance for the year are as follows:

	2021	2020
Balance, beginning of year	**$ 88,297,485**	$ 116,393,862
Funding received or receivable during the year:		
Genome Canada	**15,616,207**	13,237,033
Province of British Columbia	**3,969**	250,000
Provincial Health Services Authority	**15,000,000**	–
Industry Partners	**280,000**	454,499
Other	**599,289**	–
	119,796,950	130,335,394
Lease inducement amortization	**23,565**	47,128
	119,820,515	130,382,522
Less:		
Amount amortized to revenue	**(11,763,244)**	(41,988,046)
Amount transferred to fund capital assets purchased during the year (note 9)	**(1,100,643)**	(96,991)
	(12,863,887)	(42,085,037)
Balance, end of year	**$ 106,956,628**	$ 88,297,485

9. Deferred contributions related to capital assets:

Deferred contributions related to capital assets represent the unamortized amount of contributions received for the purchase of capital assets. The amortization of such contributions is recorded as revenue in the statement of operations and changes in net assets.

The changes in the deferred contributions related to capital assets balance for the year are as follows:

		2021		2020
Balance, beginning of year	**$**	**184,517**	$	232,472
Funding spent on capital asset purchases		**1,100,643**		96,991
		1,285,160		329,463
Less amount amortized to revenue		**(111,549)**		(144,946)
Balance, end of year	**$**	**1,173,611**	$	184,517

10. Commitments:

(a) Funding:

(i) Genome Canada:
The Corporation enters into funding agreements with Genome Canada (the agreements). In accordance with these agreements the Corporation agrees to secure on an on-going basis cash or cash equivalent commitments from other parties representing at least 50% of the total costs of the projects covered by the agreements. In addition, Genome Canada agrees to disburse an amount only up to the amount of the formal commitments from other parties. However, Genome Canada may provide funding notwithstanding the fact that formal commitments from other parties have not yet been secured. Genome Canada has also agreed that funds, provided in good faith, where commitments from other parties have not yet been secured, shall not be reimbursable to Genome Canada.

In accordance with each respective agreement, the Corporation has agreed, among other things, to provide Genome Canada with a co-funding plan for each project. A co-funding plan for each project has been provided to and accepted by Genome Canada.

The list of active research funding agreements with Genome Canada by program, and the supporting commitments from other parties for the active research projects covered by these agreements, as at March 31, 2021 is as follows:

Funding agreement description		**Support commitment**
Genomic Applications Partnership Program	$	21,374,138
2014 Large-Scale Applied Research Project Competition		19,832,337
2015 Disruptive Innovation in Genomics Competition		5,071,275
2015 Large-Scale Applied Research Project Competition		20,679,633
2017 Large-Scale Applied Research Project Competition		29,336,729
2017 Bioinformatics and Computational Biology		3,556,427
2018 Large-Scale Applied Research Project Competition		3,445,880
Other		9,326,530

(ii) Province of British Columbia:
In accordance with an agreement for funding received, dated March 30, 2015, and updated on March 24, 2017, March 29, 2018 and March 26, 2019, the Corporation received funding of $85,000,000 to support its 2015 to 2020 strategic plan: Powering British Columbia's Bioeconomy. In accordance with the Agreement, the Corporation completed and submitted to the funder an accountability framework that included robust and detailed performance metrics on November 27, 2015. The Corporation launched its Industry Innovation Program in October 2015 as part of its commercialization strategy. Included as part of that strategy, and contingent upon the success thereof, is the intent to repay the Province $10,800,000 over the next decade (note 4).

Pursuant to the funding agreement dated March 26, 2019, the Corporation received $15,000,000 during the prior year to support the Corporation's 2020 to 2023 strategic plan.

(b) Project commitments:
In the normal course of business, the Corporation enters into Collaborative Research Agreements for the completion of milestone based research projects. Detailed below is the estimated remaining commitment of the Corporation's funds relating to active research programs. The Corporation typically provides co-funding to research projects, whereby its funds are combined with funds from other sources to provide the total project award amount. Funds provided directly to the research institution by third parties are included in the total award amount shown in the table below.

10. Commitments (continued):

(b) Project commitments (continued):

The total award amount and estimated remaining commitment of the Corporation by program as of March 31, 2021 is as follows:

Approved programs		Total award amount		Estimated remaining Corporation commitment
Current programs:				
2014 Large-Scale Applied Research Project Competition	$	32,637,826	$	1,360,825
2015 Large-Scale Applied Research Project Competition		31,971,803		935,221
2017 Large-Scale Applied Research Project Competition		59,328,181		6,829,344
2018 Large-Scale Applied Research Project Competition		9,415,091		2,109,460
2017 Bioinformatics and Computational Biology		6,499,056		577,677
2015 Disruptive Innovation in Genomics Competition		8,007,398		73,014
Genomic Applications Partnership Program		37,246,822		2,954,690
Canadian COVID-19 Genomics Network (CanCOGeN)		2,236,114		–
Genome Canada Pilot Projects		16,476,831		976,755
2017 Genomics Technology Platforms		36,952,992		570,435
Applied Genomics Consortium Program		31,193,623		96,697
Human Epigenome (CIHR)		15,228,992		385,000
Transplantation (CIHR)		4,000,000		50,000
Quantitative Imaging Network (CIHR)		3,964,127		365,522
Canadian Rare Diseases (CIHR)		3,979,500		–
Environment and Genes (CIHR)		2,000,000		–
User Partnership Program		12,775,337		406,450
Sector Innovation Program		7,406,003		2,411,716
Societal Issues		445,333		55,000
ERA-MBT		780,119		193,119
GenSolve Program		5,307,617		975,796
Genome British Columbia Pilot Programs		38,493,589		1,138,070
COVID-19 Regional Genomic Initiatives		3,601,167		859,653
Entrepreneurship Partnership Program		12,278,179		339,600
Science World British Columbia Outreach Program		200,000		28,571
		382,425,700		23,692,615
Closed programs:				
Competition I, II, III		186,363,352		–
Competition in Applied Genomics Research in Bio-products or Crops		24,346,330		–
International Competition		12,881,913		–
Applied Genomics and Proteomics in Human Health		44,099,840		–
Applied Genomics Innovation Program		24,437,610		–
Translational Program for Applied Health		17,891,275		–
New Technology Development Projects		5,509,566		–
Western Economic Diversification Programs		20,743,088		–
Science and Technology Platforms		71,061,922		–
Technology Development Initiatives Fund		706,536		–
Other Pilot Programs		3,561,133		–
Advancing Technology Innovation through Discovery		5,702,315		–
Personalized Medicine Program		8,168,169		–
2010–2012 Large-Scale Applied Research Project Competition		90,528,960		–
Human Microbiome (CIHR)		4,827,122		–
Entrepreneurship Education in Genomics Program		979,966		–
2012–2015 Bioinformatics and Computational Biology		6,526,023		–
2015–2017 Science and Technology Platform		7,999,946		–
2015 Technology Development		5,926,633		–
Strategic Opportunities Fund		14,305,078		–
Strategic Opportunities Fund for Industry		6,745,443		–
Brain Canada: Alzheimer's/MIRI 1&2/ PSG		18,123,152		–
Centre for Drug Research and Development Fund		4,823,919		–
		586,259,291		–
Total	$	968,684,991	$	23,692,615

10. Commitments (continued):

(c) Operating lease:

The Corporation has entered into operating lease agreements for office premises which expire at various dates until September 30, 2027. Minimum payments for the next seven fiscal years are as follows:

2022	$	637,305
2023		637,305
2024		637,305
2025		648,807
2026		660,308
Thereafter		990,462
Total	$	4,211,492

11. Genome British Columbia Foundation:

Genome British Columbia Foundation (the "Foundation") is a registered charity established to promote and foster life sciences research for the public benefit by coordinating, sponsoring and carrying educational conferences, seminars, workshops and symposiums. The Foundation is exempt from income and capital taxes.

The majority of the Foundation's Board of Directors are also members of the Corporation, and as such, the Corporation controls the Foundation. In accordance with the CPA Canada Handbook Section 4450, the Corporation has chosen not to consolidate the Foundation but has followed the disclosure requirements. The Corporation has no economic interest in the Foundation.

Financial information of the Foundation as at March 31, 2021 and March 31, 2020 and for the years ended March 31, 2021 and March 31, 2020 are as follows:

		2021		2020
Cash	**$**	**20,688**	$	34,970
Deferred contributions		**(20,688)**		(34,970)
Net assets	**$**	**–**	$	–
Revenues	**$**	**14,285**	$	14,286
Expenses		**(14,285)**		(14,286)
	$	**–**	$	–
Cash used in:				
Operations	**$**	**(14,282)**	$	(14,271)
Net change in cash	**$**	**(14,282)**	$	(14,271)

There are no significant differences in accounting policies between the Foundation and the Corporation.

12. Financial risks:

(a) Liquidity risk:

Liquidity risk is the risk that the Corporation will be unable to fulfill its obligations on a timely basis or at a reasonable cost. The Corporation manages its liquidity risk by monitoring its operating requirements. The Corporation prepares budget and cash forecasts to ensure it has sufficient funds to fulfill its obligations. There has been no significant change to the risk exposures during the year ended March 31, 2021.

(b) Credit risk:

Credit risk refers to the risk that a counterparty may default on its contractual obligations resulting in a financial loss. The Corporation deals with creditworthy counterparties to mitigate the risk of financial loss from defaults. There has been no significant change to the risk exposures during the year ended March 31, 2021.

(c) Market risk:

Market risk is the risk that changes in market prices, as a result of changes in foreign exchange rates, interest rates and equity prices, will affect the Corporation's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while maximizing the return.

(i) Currency risk:

Investments in foreign securities are exposed to currency risk due to fluctuations in foreign exchange rates. The Corporation is exposed to currency risk on its foreign currencies held within its cash accounts and through its investments in the International Equity Fund.

(ii) Interest rate risk:

Interest rate risk is the risk that the fair value of the Corporation's investments will fluctuate due to changes in market interest rates.

(iii) Other price risk:

Other price risk relates to the possibility that the fair value of future cash flows from financial instruments will change due to market fluctuations (other than due to currency or interest rate movements). The diversification across various asset classes is designed to decrease the volatility of portfolio returns.

There has been no significant change to the risk exposures during the year ended March 31, 2021, other than the continuing potential impact that the COVID-19 pandemic might have as disclosed below.

In March 2020 the COVID-19 outbreak was declared a pandemic by the World Health Organization. As a result of the pandemic, there was significant market volatility experienced with respect to equity prices, interest rates, bond yields and foreign exchange rates, which impacted the market value of the Corporation's investments throughout the year.

At this time, the Corporation has not experienced a reduction in any of its major funding sources. However, the impact of the pandemic creates uncertainty over future cash flows from investment income, may cause significant changes to the assets or liabilities and may have a significant impact on future operations. An estimate of the financial effect is not predictable at this time. The Corporation continues to closely monitor the impact of the pandemic on its financial results and continuing operations.

CORPORATE INFORMATION

Board of Directors (for fiscal year ended March 31, 2021)

John Shepherd
Chair
Past Director, Leukemia/Bone Marrow Transplant Program of BC
University of British Columbia

Margaret (Peggy) Johnston
Vice-Chair
Independent Consultant
Former Senior Program Officer
Bill & Melinda Gates Foundation

Judi Beck
Director General
Pacific Forestry Centre
Natural Resources Canada

Lenard F. Boggio
Retired Partner
PricewaterhouseCoopers LLP

Christine Dean
Strategy Advisor & Consultant
Formerly VP Global Timberlands Technology
Weyerhaeuser Company

Jock Finlayson
Senior Policy Advisor
Business Council of British Columbia

Janet Grove
Partner, Head of Canadian Life Sciences and Healthcare Group
Norton Rose Fulbright Canada LLP

Nancy Olewiler
Director
School of Public Policy
Simon Fraser University

Kausar N. Samli
Executive, Expert, Consultant

Pascal Spothelfer
President and Chief Executive Officer
Genome British Columbia

Gavin Stuart
Professor
Faculty of Medicine
University of British Columbia

John F.H. Thompson
Past Chair
Consultant, PetraScience Consultants Inc.

Kory Wilson
Executive Director, Indigenous Initiatives and Partnerships
British Columbia Institute of Technology

Board Observers

Mary Ackenhusen
Senior Executive in Residence
Partnerships and Innovation Division
Ministry of Health
Province of British Columbia

Rob Annan
President and Chief Executive Officer
Genome Canada

Christian Hansen
Regional Director General (Pacific Region)
Innovation, Science & Economic Development Canada (ISED)

Management

Pascal Spothelfer
President and Chief Executive Officer

Tony Brooks
Chief Financial Officer and VP Entrepreneurship & Commercialization

Federica Di Palma
Chief Scientific Officer and Vice President, Sectors

Sally Greenwood
Vice President, Communications and Societal Engagement

Quinn Newcomb
Vice President, Corporate Development

Auditors

KPMG LLP
Vancouver, BC

Legal Counsel

Richards Buell Sutton LLP
Vancouver, BC

Thanks to our Funders

Genome BC thanks its funding partners including the Province of British Columbia, the Government of Canada through Genome Canada, Western Economic Diversification Canada, and project co-funders.

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We also thank all those who assisted in developing this annual report, including the management and staff at Genome BC, Genome BC funded researchers, and the Carter Hales Design Lab team.

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