

Research at the ready during the COVID-19 pandemic

The COVID-19 pandemic underlined the important role Canadian labs play in helping researchers tackle global crises as they arise. Not only were health researchers equipped and ready to contribute to the global effort to develop and test vaccines, but those with expertise in many other disciplines were positioned to share their knowledge on the social measures and policies needed to contain the spread of COVID-19.

Researchers in psychology offered innovative ways to maintain mental health as stress levels rose; leaders in education technologies extended new options to parents and schoolboards scrambling to teach virtually; material scientists and engineers retooled laboratory equipment and worked with the private sector to produce much-needed medical supplies.

For more than 20 years, Canada has invested in establishing a strong foundation of cutting-edge labs, equipment and facilities at universities and colleges across the country. That these laboratories were ready to perform under the most urgent circumstances reflects Canada's foresight and dedication to research that benefits everyone.

2020

March 20

March 23

THE CFI'S RESPONSE TO COVID-19

The CFI makes provisions to allow salary support for research personnel who were temporarily redeployed from CFI-funded infrastructure to support COVID-19 research.

More than \$11 million is announced from our **Major Science Initiatives Fund (MSI)** to support the operation of **Vaccine and Infectious Disease Organization (VIDO)** in their effort to find a vaccine for the novel coronavirus. Many of Canada's large, complex research facilities **supported through the CFI's MSI Fund** pivoted their research to take on the challenges posed by the global pandemic. Here are a few examples of how:

- **SNOLAB**, an underground science laboratory specializing in neutrino and dark matter physics at Queen's University is applying its expertise in gas handling and control systems used in dark matter experiments to design a simple ventilator;
- **Érudit**, an online database of Canadian social sciences and humanities publications, led by Université de Montréal, has opened access to its academic articles on the social, environmental and economic impacts of the pandemic;
- **CGEn**, Canada's national platform for genome sequencing and analysis, leads the country's COVID-19 host genome sequencing initiative, which includes sequencing the genome of 10,000 Canadians to understand how the body responds to COVID-19;
- The **Canadian Research Data Centre Network**, headquartered at McMaster University, has several social science projects focused on understanding the pandemic's impact on society, the labour market and the economy;
- The University of Saskatchewan's **Canadian Light Source** has three streams of ongoing COVID-19 research taking place on drug development, studying the coronavirus' physical behaviour and transmission, and improving equipment for COVID-19 frontline workers;
- The **Centre for Phenogenomics** has collaborated with Sinai Health Systems to streamline the process of sterilizing personal protective equipment, including N95 masks, and;
- CMC Microsystems, which manages **Canada's National Design Network**, collaborated with researchers from across the country to make a device that detects COVID-19 using optical technology.



The CFI provides up to \$5 million to optimize the research services offered by VIDO to the national research community working against COVID-19.

April
3

Annie LeBlanc:
Is it possible to predict the psychological and social consequences of the pandemic?
Associate Professor
Université Laval



Karen Mossman
Vice-President,
Research (acting)

Arinjay Banerjee
Post-doctoral researcher

How do humans respond to coronaviruses?
McMaster University




May
7

The CFI launches the **#GoResearch campaign**, a public outreach initiative that showcased COVID-related research being conducted in CFI-funded labs to raise awareness about how the research in labs across Canada was answering questions, discovering therapies and offering hope during the pandemic.

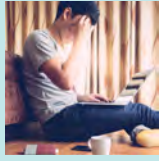
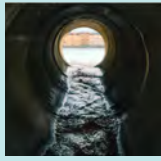
The CFI launches a competition to invest up to \$25 million through the Exceptional Opportunities Fund to support COVID-19-related research from all disciplines at **Canadian universities and research hospitals.**

June
8



July
15

A second Exceptional Opportunities Fund competition launches to invest \$2 million in research related to COVID-19 at **colleges, polytechnics and Cégeps.**



For more information about the Canada Foundation for Innovation and our mandate, visit [Innovation.ca](https://www.innovation.ca). Please **contact us** for more about our pandemic initiatives or about our programs.

November 6

2021

April 19

Close to **\$28 million in funding from our Exceptional Opportunities Funds announced** for 79 projects at 52 universities, research hospitals, colleges, polytechnics and Cégeps to support COVID-19-related research. With a new boost of infrastructure support, researchers are poised to find solutions to the challenges that arose under the pressure of the pandemic. **Read about some of the research being supported.**



\$500 m

Canada's federal budget proposes \$500 million over four years for the CFI to support the bio-science capital and research infrastructure needs of post-secondary institutions and research hospitals across the country as part of an overall boost for Canada's bio-science talent pipeline and research systems.

NAVIGATOR FACILITIES RESPOND TO COVID-19

The **Research Facilities Navigator** is the CFI's national directory of research labs that are collaborating with partners in industry, academia and government. Many of these labs responded to the pandemic by shifting their work to contribute to the fight against COVID-19.

Kemitek, for example, a research and technology transfer centre in Thetford Mines, Que., converted its chemical process production plant so it could produce hand sanitizer for a regional hospital in collaboration with local industry partners Prolab Technolub inc. and Solutions Chemco.

And Niagara College's **Walker Advanced Manufacturing Innovation Centre** in Welland, Ont., produced thousands of face shields to protect frontline healthcare workers in collaboration with local manufacturer Jay-Line. Their

team also supported McMaster University researchers in developing 3D-printed laryngoscopes that help place tubes in COVID-19 patients needing assisted ventilation.

From assisting in the development of a vaccine to designing more efficient ventilators and producing personal protective equipment for health care workers on the frontline, many Navigator labs made valuable contributions to help keep Canadians safe and healthy.

RESEARCH FACILITIES NAVIGATOR

Visit [the Navigator](#) to explore more state-of-the-art labs and connect with researchers across Canada. For more information about the Navigator, please **contact us**.

