

CANADIAN INNOVATION DURING THE COVID-19 PANDEMIC

By Colleen Spring Zimmerman and Catherine Hart

Canadian Innovation Week, namely November 16th to November 20th this year, is a movement organized by the Rideau Hall Foundation and Canadian Innovation Space which seeks to recognize Canadians advancing their respective industries and sectors, to connect individuals across the country and to encourage collaboration, creativity and innovation amongst current and future innovators.

Canadian Innovation Week is being held virtually this year. Many of the week's conversations concern efforts related to the fight against the COVID-19 pandemic. Below, we briefly outline some of the major developments in the past eight months with respect to intellectual property innovation during the pandemic.

The Pandemic Response Challenge Program

The Government of Canada, which is expected to spend an estimated \$225.9 billion in various COVID-19 response measures, has established the [Pandemic Response Challenge Program](#) (the "**Program**"). The National Research Council of Canada (the "**NRC**"), Canada's largest research and development organization, is responsible for managing the Program. The Program is designed to accelerate the development of technologies that could be applied to fight the COVID-19 pandemic. It has included participants ranging from universities to biotechnology firms. The Program includes three research areas: therapeutics and vaccine development, rapid detection and diagnosis, and digital health (the "**Research Areas**").

The NRC has collaborated with many different organizations to find solutions related to the COVID-19 pandemic. For example, the NRC partnered with a company to repurpose a device, originally built as a food safety solution, that decontaminates personal protective equipment including N95 respirators, masks, and medical gowns, so they can be safely reused by medical professionals. It also partnered with a biopharmaceutical company for the purpose of developing a pan-coronavirus vaccine candidate, targeting COVID-19, severe acute respiratory syndrome (known as SARS), and Middle East respiratory syndrome (known as MERS).



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Patenting Activity and the Pandemic

The Canadian Intellectual Property Office ("**CIPO**") has released a publication, "[Patenting to Fight Pandemics: The Canadian Story](#)", that analyzes patenting activity with respect to the Research Areas. The CIPO publication states that CIPO identified 178 patented inventions, from the period of 1999-2018, which belong to Canadian institutions and could be used to assist in the fight against COVID-19 (the "**COVID-19 Adaptable Patents**"). CIPO noted that China and the United States have been leading in the development of pandemic-mitigating technologies. However, Canadian institutions hold the eighth largest patent portfolio with respect to COVID-19 related technologies in the world.

CIPO's study suggests that the COVID-19 Adaptable Patents have not been equally distributed across the Research Areas. The data suggests that 72% of the COVID-19 Adaptable Patents were in therapeutics and vaccine development, 18% in rapid detection and diagnostics, and 10% in digital health. CIPO also noted that this data corresponds with patent filing trends noticed after the SARS and MERS outbreaks. After such outbreaks, patent filings related to therapeutics and vaccine development increased significantly. Notably, CIPO recognized that Canada shows a high specialization for pandemic and outbreak mitigation and fighting technologies and that the country's growth in this field is comparable to the growth experienced in Germany and Japan.

During Innovation Week, discussions regarding the COVID-19 pandemic will encourage Canadians and businesses to use their skills to operationalize new ideas and technologies and find success through innovation.