

# National pandemic preparedness biobanking

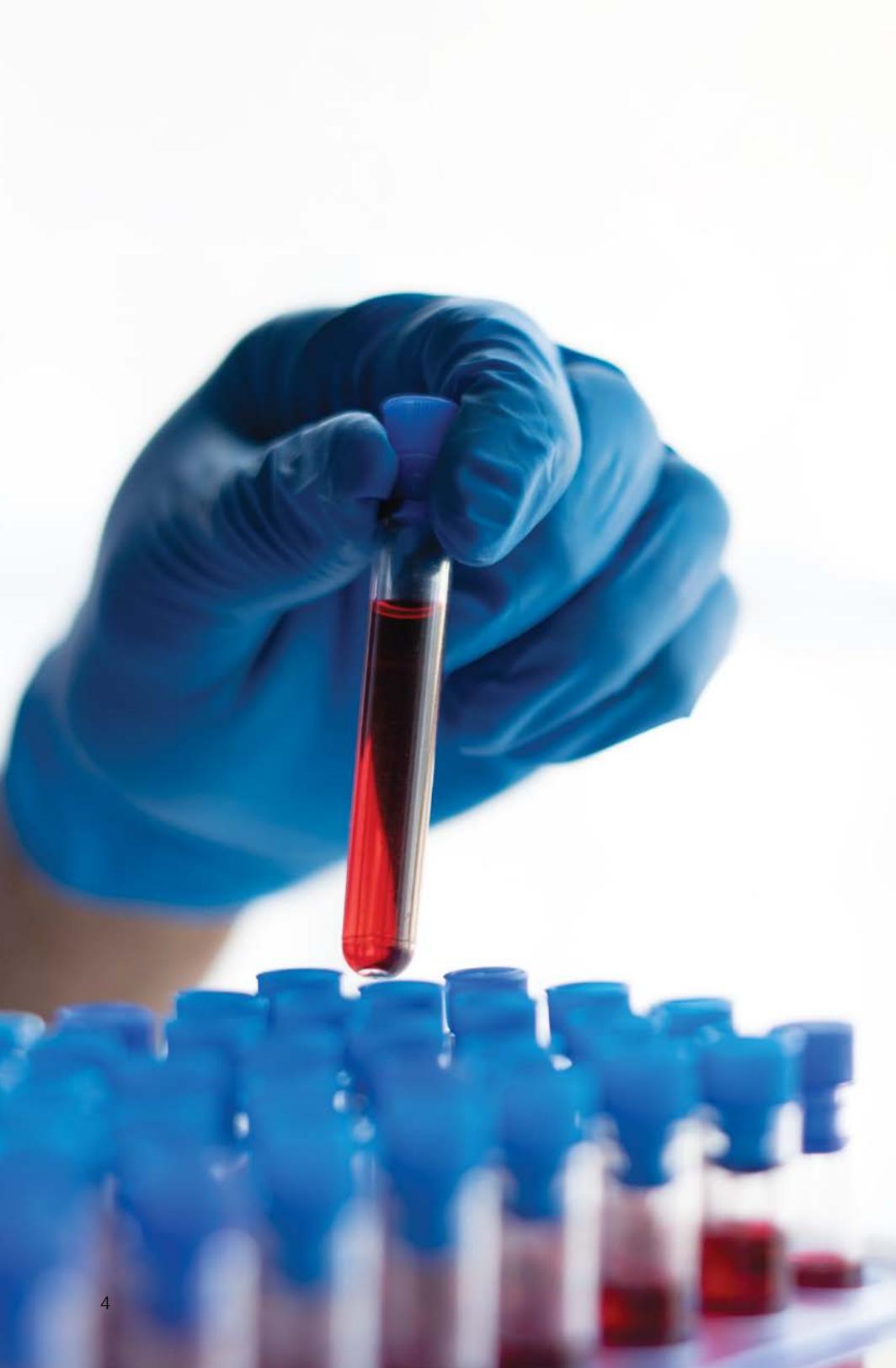


CoVaRR\*Net Biobank



The Coronavirus Variants Rapid Response Network (CoVaRR-Net) Biobank offers rapid access and exchange of biological materials, reagents and data between researchers as well as industry partners.

**The goal:** Accelerate academic research and inter-institutional collaborations to address SARS-CoV-2 and any future health crisis.



The CoVaRR-Net Biobank collects, stores and distributes longitudinal and comprehensive clinical data, specimens for pathogen studies, and biological samples for host responses and immunological studies. The Biobank also offers an array of laboratory services to support researchers in sample characterization such as immunological assays (cellular and molecular), genetic analyses and serology.

Specimens are collected from relevant populations of interest: uninfected, convalescent (i.e., recovering), vaccinated unexposed, vaccinated convalescent, immunized with different vaccine products, with hybrid immunity, etc. An array of specimen types are available in the CoVaRR-Net Biobank, including:



Blood cells



Plasma



Serum



Viruses



Saliva



Research reagents



Nasal swabs



Wastewater

The Biobank prioritizes Equity, Diversity, Inclusion and Indigeneity (EDI&I), ethics, and privacy in specimen and data collection.





## Preparing for any pandemic

The CoVaRR-Net Biobank is actively transitioning operations towards pandemic preparedness biobanking by expanding its national sampling, surveillance and analysis to include other emerging microbial threats.

Research findings are communicated to scientists and Canadian health policy makers to aid in decisions to accelerate diagnostic and surveillance assay development for drug therapies, vaccine effectiveness and public health.

## Accelerating access to pathogens

The CoVaRR-Net Biobank, headquartered at The Ottawa Hospital Research Institute (OHRI), has established ready-to-use approved, broad, provincial, multi-jurisdictional research ethics protocols to support rapid research.

CoVaRR-Net has also developed a novel **Universal Data and Biological Materials Transfer Agreement (UDBMTA)**, in partnership with the University of Ottawa and the OHRI, vetted by more than 30 Canadian research institutions, to facilitate the rapid sharing of biological samples, reagents and data.



The 4-step process to request access to samples from the CoVaRR-Net Biobank:



## REQUEST

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- ▶ Researcher searches catalogue and completes application



## REVIEW

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- ▶ Scientific Review Panel reviews application
- ▶ Research Ethics and Access Officer evaluates contracts (i.e. UDBMTA)



## SELECT

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- ▶ Biobank Coordinator identifies samples from inventory
- ▶ Biobank Technician retrieves samples



## SHIP

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- ▶ Biobank Technician and Coordinator ship samples and transfer data
- ▶ Biobank Coordinator follows-up with researcher

## Cataloguing & oversight

The CoVaRR-Net Data Platform supports the storage, management and sharing of associated metadata with the Biobank. The contents of the CoVaRR-Net Biobank are catalogued using a customized biobank information management software (BIMS), which is available for use by other biobank partners who require such a tool. The Biobank is designed to expand its storage capacity as needed.

The Biobank works in partnership with CoVaRR-Net directors in Bioethics and Equity, Diversity, Inclusion, and Indigeneity (EDI&I), as well as the Indigenous, Engagement, Development Research (CIEDAR) Pillar, for advisement on sample collection, de-identification and banking processes.



## Governance: Advisory Board

**Biobank Director:**

Dr. Angela Crawley<sup>1,2,3,4</sup>

**Data Platform Director:**

Dr. Amy Hsu<sup>1,2,7</sup>

**Biobank Clinical Associate Directors:**

Dr. Curtis Cooper<sup>1,2,3</sup>

Dr. Donald Vinh<sup>5,6</sup>

**Bioethics Directors:**

Dr. Raphael Saginur<sup>1</sup>

Dr. James Robblee<sup>8</sup>

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<sup>4</sup>Carleton University, Ottawa, ON; <sup>5</sup>McGill University Health Centre, Montréal, QC;  
<sup>6</sup>Research Institute-McGill University Health Centre, Montréal, QC; <sup>7</sup>Bruyère Research  
Institute, Ottawa, ON; <sup>8</sup>University of Ottawa Heart Institute, Ottawa, ON



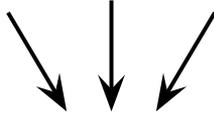
# The Canadian COVID-19 Biobank and Data Alliance

The Canadian COVID-19 Biobank and Data Alliance links biobanks across the country with the intent to interconnect resources and facilitate material and data sharing towards a model of national pandemic preparedness biobanking. A CoVaRR-Net initiative, the Alliance brings together other biobanks across Canada, adding 400,000+ samples and longitudinal data collected from over 40,000 Canadians.



The CoVaRR-Net Data Platform developed a metabase that integrates query-relevant data from the information management systems of each individual partner biobank, through which researchers can perform Alliance-wide searches for specimens and data.

Search relevant data from partner biobanks



CoVaRR-Net Biobank



CoVaRR-Net Data Metabase



Canadian COVID-19 Biobank  
Alliance Data Catalogue

CoVaRR-Net has intentionally chosen a **federated model to share resources and data** that ensures partner biobanks retain custody over the materials and data they collect and store, and privacy is honoured through a strict de-identification process.

## About CoVaRR-Net

The Coronavirus Variants Rapid Response Network (CoVaRR-Net) was established in March 2021 to address the emerging threat of SARS-CoV-2 and its variants of concern (VOC). It has since been evolving into an academic pandemic prevention and preparedness network. The network's mandate is to facilitate rapid response research to identify new SARS-CoV-2 variants and other pathogens that pose a potential risk to be highly transmissible and cause severe disease within the Canadian population.

Funded by the Canadian Institutes of Health Research (CIHR), CoVaRR-Net is a national network of researchers collaborating through ten multidisciplinary pillars and several major initiatives which study and analyze different biological aspects of the variants with a focus on Indigenous communities and public health impacts to engage in rapid pandemic research.



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