



**COVID-19 IMMUNITY
TASK FORCE**

Spotlight on **CITF-FUNDED RESEARCH**



CITF Announcements

CITF Databank Dashboard: new interactive features to see what's in the Databank

The CITF has just launched two new pages on its Databank Dashboard with interactive and customizable features to help researchers access data. New to the Dashboard is the Harmonized Data Overview, which introduces the harmonized datasets and how to use them, and the Harmonized Cohort Search Dashboard which allows researchers with a specific research question to assess the feasibility of using CITF harmonized datasets as a source for their work. Discover more and register by visiting the Data Access Portal.

[Read more](#)

Infection-acquired seroprevalence in Canada increases slightly in October

Our Seroprevalence in Canada page has just been updated with the latest results from nearly two dozen studies which show infection-acquired seroprevalence in Canada increased yet again month over month, rising to 81.7% at the end of October compared to 79% at the end of September.

Findings from several seroprevalence studies across Canada show that seropositivity due to infection increased in all regions of Canada.

[Read more](#)



CITF-Funded Research Results

About 60% of Manitobans had infection-acquired SARS-CoV-2 antibodies by winter 2022

A CITF-funded study, published in *BMC Public Health*, aimed to obtain a more accurate estimate of the true infection burden of SARS-CoV-2 in the province of Manitoba by accounting for all age groups, vaccination status, and waning antibody levels. The researchers found that by February 2022 about 60% of Manitobans had infection-acquired SARS-CoV-2 antibodies. The highest levels found in the province were in the Northern and Southern regional health authorities. Of all age groups, children ages 1-9 showed the highest seroprevalence due to infection at 94% while people over 60 had the lowest at 30%.

[Read more](#)

Recipients of solid organ transplants can mount significant T-cell responses to the BA.4/5 and XBB.1.5 Omicron variants following mRNA vaccination against ancestral SARS-CoV-2

A CITF-funded study, published in *Transplantation*, provided insights into the kinetics of variant-specific T-cell responses in recipients of solid organ transplants, with the aim of informing clinical and public health guidelines for immunocompromised populations. The study showed that mRNA vaccination against the ancestral strain of SARS-CoV-2 strongly induces T-cells that are also reactive (cross-reactive) to the BA.4/5 and XBB.1.5 Omicron strains. However, the magnitude of the response to Omicron

strains was significantly lower than the response to the ancestral strain.

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Baseline antibodies to other human coronaviruses enhance immune responses to SARS-CoV-2 following vaccination

A CITF-funded study, published in *Frontiers Immunology*, highlights the interplay between SARS-CoV-2 vaccination, pre-existing immunity to common human endemic coronaviruses (HCoVs), and the resulting immune response to SARS-CoV-2. Specifically, higher baseline HCoV-229E and HCoV-NL63 anti-spike IgG antibody levels were associated with increased SARS-CoV-2 anti-spike IgG antibody levels.

[Read more](#)

Passive samplers are rapid, reliable, and cost-effective for monitoring wastewater for SARS-CoV-2

A CITF-funded study, published in *Pathogens*, found that overall, the passive sampler is a rapid, reliable, and cost-effective device for use in wastewater surveillance. The passive sampler containing absorbent materials or membranes is placed in a targeted sewage catchment to capture viruses for a defined period of time. This method could be used as an alternative sampling method for the detection of SARS-CoV-2 in wastewater in small sewage systems with low water flow.

[Read more](#)

SARS-CoV-2 nucleic acid amplification test demonstrated high sensitivity

A CITF-funded study, published in *JAMA Network Open*, revealed that the SARS-CoV-2 nucleic acid amplification test (NAAT) demonstrated a robust sensitivity of 96.2%, signifying efficacy in detecting infections. This performance remained consistent throughout the initial two weeks of

symptoms. Moreover, the diagnostic yield of the test exhibited variability based on symptom duration, reaching its highest yield of 20% around day 10. This implies that individuals with persistent respiratory symptoms are more likely to receive a diagnosis of COVID-19.

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