



**COVID-19 IMMUNITY  
TASK FORCE**

# Research Roundup

Your weekly review on COVID-related research



## Spotlight on CITF-funded Research

### **Early results from a national study confirm antibody levels are stronger after receiving two doses**

Initial preliminary results from the Canadian Partnership for Tomorrow's Health (CanPath) show a high degree of variability in the level of antibodies produced by a single dose of a COVID-19 vaccine. These findings highlight the importance of accelerating second doses as the Delta variant continues to spread, particularly with the vast majority of Canadians having received only a single vaccine dose. This is the first pan-Canadian study using samples from a wide range of participants to confirm evidence from vaccine manufacturers' clinical trials, as well as findings in a recent preprint from the United Kingdom and other smaller studies.

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### **Extensive review of seroprevalence provides a global panorama on immunity**

CITF-funded SeroTracker carried out a living systematic review of 968 seroprevalence studies that included 9.3 million participants in 74 countries.

Their findings, published in *PLOS One*, suggest that the general population median seroprevalence worldwide was low (4.5%), but found important differences when comparing infection rates from diagnostic testing.

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## **Early results from the CHILD Cohort Study give insight into children and family outcomes during the COVID-19 pandemic**

As part of their CITF-funded study, Dr. Meghan Azad and Dr. Padmaja Subbarao, along with their colleagues (Drs. Mandhane, Moraes, Simons and Turvey) from the CHILD Cohort Study, have reported preliminary findings from CHILD's COVID-19 add-on study, currently underway. Researchers collected information from 5,362 participants and 1,459 families living in Vancouver, Edmonton, Winnipeg, and Toronto to better understand how COVID-19 is affecting children and their immediate families. Self-reported results, collected between January 11 and June 13, 2021, show that 1.5% of children and 2.1% of adults tested positive for SARS-CoV-2 at some point since the pandemic began. Importantly, the study also gathered data regarding stress, coping mechanisms, and life changes that have occurred thus far during the pandemic.

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## **Preliminary results provide clues to how Canada fared in the second wave of the pandemic**

In their CITF-funded research, Dr. Prabhat Jha and his team leading the Action to Beat Coronavirus (Ab-C) study have released preliminary seroprevalence estimates from the second wave of the COVID-19 pandemic, which have not yet undergone peer review. Dried blood spot tests from nearly 7,200 Canadians sampled in January and February 2021 revealed that approximately 5-6% of the study population tested positive for COVID-19 antibodies, suggesting exposure to SARS-CoV-2.

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## Publications from our Experts

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### **SARS-CoV-2 infection in wild mice**

SARS-CoV-2 was observed to infect many mammals, including deer mice, one of the most prevalent types of rodents in North America. Scientists working at the Public Health Agency of Canada's National Microbiology Laboratory, including CITF Testing Working Group members Heidi Wood, Guillaume Poliquin, and Michael Drebot, recently published findings in *Nature Communications* indicating that deer mice can be infected by SARS-CoV-2 in the lab, and that they can transmit the virus to non-infected cage mates. These findings are promising because they indicate that these deer mice may be a suitable animal model to study the COVID-19 disease as they are likely to reflect the outcomes of infection observed in humans.

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## International Research Review

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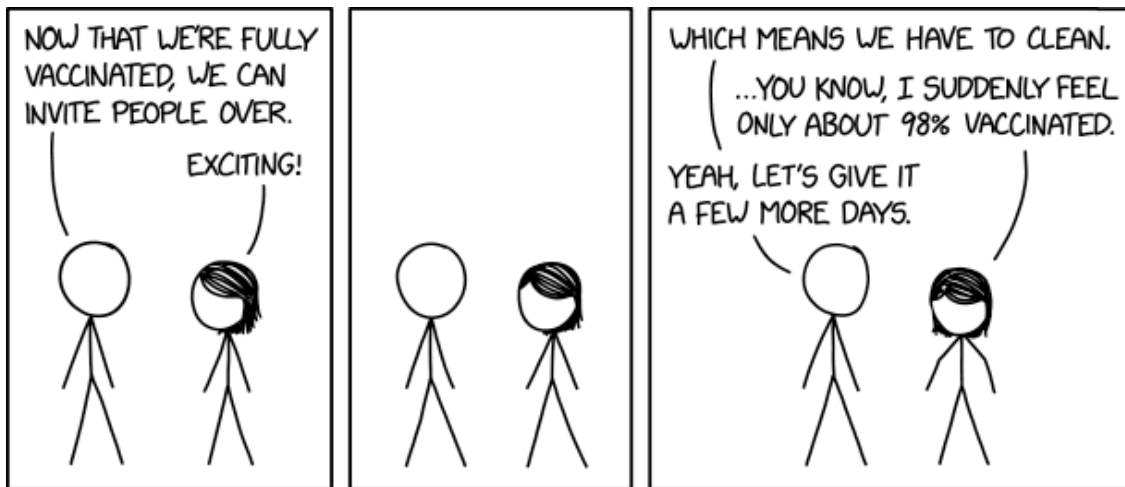
### **Study in primates suggests that COVID vaccines in young children may be safe and effective**

Immune responses to infections and vaccines may be different in children, compared to adults. A careful evaluation of novel vaccines in the pediatric population is therefore warranted. Recent research from a pre-clinical study published in *Science Immunology* suggests that two COVID-19 vaccines were safe and effective in young macaques. Strong and long-lasting immune responses were observed in the 16 baby macaques studied; these

responses were comparable to the ones observed in adult macaques and humans.

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## Beating the pandemic blues



Comic thanks to [xkcd.com](https://xkcd.com)



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