



COVID-19 IMMUNITY  
TASK FORCE

# Research Roundup

Your weekly review on COVID-related research



## International Research Review

### **Antibody levels stay elevated throughout six months after the second dose of the Moderna COVID-19 vaccine**

The Moderna mRNA-1273 vaccine was previously shown to be 94.1% efficacious at preventing COVID-19 illness in a phase 3 trial of 30,420 volunteers. Drs. Nicole Doria-Rose from the National Institute of Allergy and Infectious Diseases and Mehul S. Suthar from Emory University School of Medicine describe the results in an ongoing phase 1 trial published in the *New England Journal of Medicine*. This trial, involving 33 healthy adults, showed that antibody levels remained high in all age groups throughout the six months after the second dose of the vaccine.

[Read Summary](#)

### **The million-dollar question: Why are kids protected from severe COVID-19 disease?**

Unlike other respiratory viral infections, such as the seasonal flu, severe COVID-19 disease and death seems to target seniors and not young children. The reasons why are unknown. Unlocking this mystery can lead to

innovative prevention and treatment alternatives. A recent study published this month in *Nature Communications* describes functionally distinct antibody signatures in responses to coronaviruses in children and in older adults.

[Read Summary](#)

## **COVID-19 mRNA vaccines in pregnant and breastfeeding women**

As with many clinical trials, pregnant and lactating women were excluded from initial COVID-19 vaccine trials. Although this is done because of safety concerns, it results in gaps in knowledge to guide vaccine decision-making. In this study in the *American Journal of Obstetrics and Gynecology*, Dr. Kathryn Gray and colleagues from Harvard Medical School and Brigham and Women's Hospital in Boston, explore immune responses among pregnant women and women who are breastfeeding following COVID-19 vaccination. Using an observational study model, the authors find that pregnant women and women who are breastfeeding have the same side effects as women who are not pregnant.

[Read Summary](#)



## **Spotlight on CITF-funded Research**

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### **Dried Blood Spot Assays: A Review**

Many Canadian serosurveys have opted to use dried blood spot (DBS) tests as a practical means to study population-level SARS-CoV-2 prevalence. Tens of thousands of Canadians have received DBS kits in the mail. In this preprint, not yet peer-reviewed, researchers, including several CITF members, set out to determine which of the available DBS assays performed the best.

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## Publications from our Experts

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### **A single dose of mRNA vaccine may trigger variant-resilient immune responses**

Emerging SARS-CoV-2 variants are a significant source of concern, especially the most resistant ones, such as the one originally identified in South Africa (B.1.351). In a publication in *Science*, CITF-funded researcher Dr. Andrés Finzi, from the Université de Montréal, helped a team from the Fred Hutchinson Cancer Research Center in Seattle find that after receiving a single dose of mRNA vaccine, participants who had previously been infected with SARS-CoV-2 were able to produce large amounts of antibodies capable of neutralizing all circulating variants, including B.1.351.

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### **Guidance for COVID-19 vaccine research in pregnant women**

Studies exploring COVID-19 vaccination among pregnant women are likely to face unique methodological challenges. In this Short Communication in *Vaccine*, Dr. Deshayne Fell, a member of the [Vaccine Surveillance Reference Group](#)'s Vaccine Safety Working Group, and her colleagues discuss critical study design, data collection, and analytical issues for observational epidemiologic studies of pregnancy outcomes following COVID-19 vaccination during pregnancy. They provide some guidance for optimal design and analysis of these studies to ensure high quality evidence to inform public health decision-making.

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## Share your Research

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