COVID-19 IMMUNITY TASK FORCE

Research Roundup

Your weekly review on COVID-related research

Spotlight on CITF-funded Research

Immunogenicity and safety of the Moderna vaccine in organ transplant recipients

Antibody levels, cell-mediated immunity, and safety were evaluated in solid organ transplant recipients who received two doses of the Moderna vaccine. Key findings from this study are as follows: 65.5% of patients had no detectable antibody (anti-RBD) response following the second vaccine dose; and 73.1% were not able to neutralize the virus after the second dose. Nevertheless, in a sub-study, nearly half of patients with no detectable anti-RBD demonstrated a strong T-cell response. This CITF/VSRG-funded study is led by Dr. Deepali Kumar at the University Health Network, who continues to evaluate the immunogenicity and safety of COVID-19 vaccines in transplant recipients across Canada.

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Low prevalence of COVID-19 among Canadian dentists during the first wave

Dental care professionals are at high risk of SARS-CoV-2 exposure due to close contact with potentially infected patients and use of aerosol-

generating procedures. A team of CIHR and CITF-funded scientists led by McGill University researcher Dr. Sreenath Madathil recently presented their results in two posters at the 99th General Session of the International Association for Dental Research (IADR). The preliminary results of their study suggests that prevalence of COVID-19 among Canadian dentists during the first wave was low (< 1%).

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Publications from our Experts

From lessons learned to action: towards a pan-Canadian immunization system

As we navigate the ongoing pandemic, the effectiveness of Canada's pandemic response is being evaluated. The auditor-general's report, released in March 2021, outlined challenges, missteps, and lessons learned. In a *Canadian Medical Association Journal* commentary, CITF-funded researcher Dr. Kumanan Wilson and colleagues, Drs. Graham Sher and Jane Philpott, react to Canada's response and suggest creating a new entity for coordinating Canada's immunization system.

Read Summary

What is needed to achieve herd immunity against SARS-CoV-2?

In this brief communication by CITF-funded researcher Dr. Shelly Bolotin and colleagues, five key elements to achieve and maintain herd immunity are presented. The authors define herd immunity and present concise information on barriers and drivers in our ability to reach this protection at the community-level. Authors discuss the importance of vaccination and the threat that variants of concern pose in achieving herd immunity.

Read Summary

International Research Review

Growing evidence for safety and effectiveness of mix-and-match COVID-19 vaccination

Mixing COVID-19 vaccine products has been done to maximize the number of people that can be fully vaccinated in settings where vaccine availability is limited or unpredictable. Information regarding immunogenicity and safety aspects of this method is growing: two recent European studies concluded that supplementing the Oxford–AstraZeneca first dose with an mRNA vaccine as the second dose (either Pfizer–BioNTech, or Moderna) triggers an antibody response that is stronger than two doses of the Oxford–AstraZeneca vaccine.

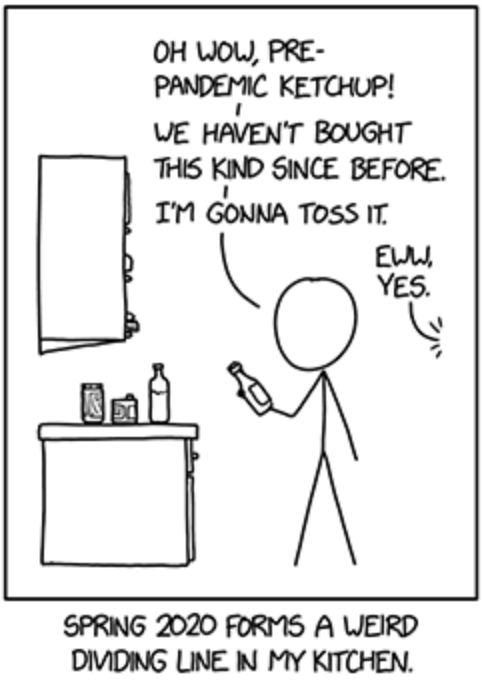
Read Summary

Long-term analysis of COVID-19 patients demonstrates durable and broad immune responses against SARS-CoV-2

While scientists are striving to identify the specific protection mechanisms against SARS-CoV-2, a recent publication in *Cell Reports Medicine* followed a group of 254 COVID-19-recovered individuals who were infected during the first surge of COVID-19 in Seattle and Atlanta. With aims to unravel the spectrum of immunity to COVID-19 infection, authors report that these individuals mounted robust humoral and cell-mediated immune responses that can be detected for over 8 months post-infection.

Read Summary

Beating the pandemic blues



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