

Australia explores susceptibility to SARS-CoV-2 variants after getting COVID-19 vaccine

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The study will explore the immune response to COVID-19-specific vaccines in Brazilian healthcare workers



An Australian-led study will investigate whether it's possible to predict who remains susceptible to SARS-CoV-2 variants after having COVID-19 or receiving a COVID-19-specific vaccine.

The study will explore the immune response to COVID-19-specific vaccines in Brazilian healthcare workers to find biomarkers that indicate whether someone will be protected from - or remains at risk of - contracting COVID-19 if exposed to a variant.

The research has received philanthropic funding from the Bill & Melinda Gates Foundation and is a sub-study of the Murdoch Children's Research Institute's (MCRI) study assessing if the Bacille Calmette-Guérin (BCG) vaccine can help protect against COVID-19.

The [BRACE trial](#) is now the world's largest study on the off-target effects of the BCG vaccine. Since the trial launched in March 2020, more than 6800 healthcare workers have enrolled across 36 sites in Australia, Brazil, the Netherlands, Spain and the UK.

Professor Nigel Curtis, Head of the Infectious Diseases Research Group at MCRI, Professor of Paediatric Infectious Diseases at the University of Melbourne and BRACE Chief Principal Investigator, said the big story of 2021 was the potential impact of SARS-CoV-2 variants.

"With the emergence of new variants - for which vaccine-induced and natural immune responses may not be as effective - there is concern that herd immunity may be undermined. If this happens, SARS-CoV-2 will continue to spread and cause disease," he said.

"We have been lucky enough to receive this additional funding for the BRACE COVID-19-Specific vaccine sub-study (BCOS) to investigate biomarkers of protection against SARS-CoV-2 infection and reinfection induced by natural infection and COVID-

specific vaccination.”

With COVID-19-specific vaccines now available to healthcare workers, BCOS will also look at whether BCG vaccine improves the immune response to Pfizer, AstraZeneca and CoronaVac vaccines.