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The biggest concern is whether current vaccine-induced memory immunity would confer any protection to new viral variants



Researchers at AIDS Institute, Department of Microbiology, LKS Faculty of Medicine of The University of Hong Kong (HKUMed) and the State Key Laboratory of Emerging Infectious Diseases, HKU, have conducted a timely study for host immune responses in mRNA-vaccinees after acute infection by the alarming Omicron variant of SARS-CoV-2.

The study demonstrated that mRNA-vaccinees had already displayed low levels of vaccine-induced neutralising antibodies and T cell responses at the time of infection. Upon vaccine breakthrough infection by the Omicron variant, mRNA-vaccinees mounted rapid broadly reactive neutralising antibodies and T cell responses, which contributed to the protection to the mRNA-vaccinees with mild clinical symptoms.

'The findings suggested that receiving the complete mRNA-vaccinations is very important for protection against SARS-CoV-2 variants of concern,' remarked Professor Chen Zhiwei, Director of AIDS Institute and Professor of the Department of Microbiology, HKUMed, who led the study, 'Increasing rapidly the vaccine coverage among all age groups is urgently needed in Hong Kong before the wide spread of the Omicron variant. Our findings also implicate that the development of Omicron-targeted vaccines as booster is urgently needed to fight all current SARS-CoV-2 Variants of Concern (VOCs)'.