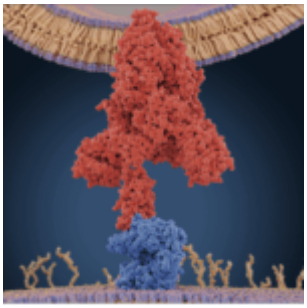
Potent neutralizing antibodies isolated from COVID-19 patients



Disclaimer: This article is a summary of Research article by Bin et al., Pre-print published on BioRxiv. This research article at the time of writing this summary has not been peer-reviewed.

SARS-CoV-2, the cause of COVID-19, is a coronavirus with genetic similarity to SARS-CoV and MERS-CoV, which caused the 2002-2004 and 2012 outbreaks, respectively. SARS-CoV-2 uses the receptor-binding domain (RBD) in its trimeric spike glycoprotein to bind to the Angiotensin-converting Enzyme 2 (ACE-2) receptor expressed in host cells. It has been hypothesized that disruption of the RBD-ACE-2 interaction may prevent virus entry, hence preventing infection. Bin *et al* (2020) have isolated and characterized 206 potential therapeutic and prophylactic monoclonal antibodies from eight COVID-19 patients. The isolated antibodies were found to prevent RBD-ACE-2 interaction and to have high binding affinity and neutralizing activity against SARS-CoV-2. Plasma from these patients was not cross-reactive against SARS-CoV or MERS-CoV, with isolated antibodies targeting SARS-CoV-2 only. Despite the findings, however, the authors could not draw a firm correlation between antibody response and disease status and therefore further studies need to be conducted.

Journal Article: Bin et al., 2020. Potent human neutralizing

antibodies elicited by SARS-CoV-2 infection. bioRxiv Preprint

Article by Vicky Gent