



COVID-19 Vaccines: From Immune Escape to Neutralizing Antibody-Based Therapeutics to Sterilizing Immunity

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Deadline for manuscript submissions:
closed (25 July 2022)

Message from the Guest Editor

The COVID-19 pandemic has been largely contained thanks to massive deployment of anti-spike vaccines. Different technologies have been in place, but none of them has been convincingly able to induce sterilizing mucosal immunity. Transmission of infection from vaccines to nonresponding immunosuppressed patients at risk for severe COVID-19 demands the development of next-generation mucosal vaccines able to induce sterilizing immunity. Mucosal vaccines come with additional benefits, such as oral route, home self-administration, and no need for needles or refrigeration chains. These manufacturing efforts are nevertheless halted by the ongoing evolution of the spike protein. Clinical experiences with neutralizing antibody-based therapeutics (i.e., anti-RBD monoclonal antibodies and convalescent plasma) have largely contributed to identifying the critical residues within the spike proteins which should be monitored for vaccine resistance.





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Message from the Editor-in-Chief

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