Special Issue

SARS-CoV-2 Spike Protein: Pathogenesis, Variants, Immunogenicity, Vaccines, and Potential Therapies

Message from the Guest Editors

SARS-CoV-2 spike-based vaccines have been proven a huge success in eliciting protective humoral and cellular immunity and mitigating the disease. Since it first began circulating, the WHO has identified five variants of concern: Alpha (B.1.1.7), Beta (B.1.351), Gamma (P.1), Delta (B.1.617.2) and Omicron (B.1.1.529). Omicron has further emerged into BA.1, BA.2, BA.2.12.1, BA.3, and BA.4/5 subvariants, which have displayed further immune escape, compromising current vaccine and antibody effectiveness. 1.Studies that broaden our current understandings of spike protein's roles in SARS-CoV-2 pathogenesis. 2. Insights into host humoral and cellular responses against spike proteins. 3. Novel approaches for spike mutation predictions and mechanisms of immune evasion. 4. Exploration of next-generation vaccine, pan-beta coronavirus vaccine, pan-human endemic coronavirus vaccine developments and potential anti-COVID therapies. 5. Interdisciplinary technologies or platforms to accelerate the development of new anti-COVID therapies.

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About the Journal

Message from the Editor-in-Chief

Vaccines (ISSN 2076-393X), founded in 2013, now has a firm history of publishing peer-reviewed, state-of-the-art research papers on vaccines and vaccination in the broadest sense. Areas covered include, but are not limited to, novel and emerging vaccine technologies, building on in-depth knowledge of what constitutes a protective immune response. These can be new vaccines for old diseases, or old vaccines for new diseases. Vaccines against cancer and autoimmune diseases explicitly are also within the scope of the journal. Because public opinion and even government policies towards vaccines and vaccination have changed, vaccine policy and public health issues are major concerns. Climate change will also have an impact on the spread of infectious diseases, and thus also on vaccine and vaccination policies worldwide.

Editor-in-Chief

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