

Special Issue

Host–Virus Interactions and Vaccine Development

Message from the Guest Editor

Host genetic factors, exemplified by MHC restriction, strictly regulate immune responses against viruses. However, innate responses are also under genetic control and affect vaccine efficacies. Correlates of protection against viral infections are explored and defined for practical purposes, but they may not reflect mechanisms of protection that operate in vivo. Thus, virus-neutralizing antibodies may not only interfere with viral attachment and entry to host cells but can also facilitate adaptive immune responses through immune complex formation, complement activation, and binding to receptors on antigen-presenting cells. A more profound understanding of genetically regulated defense mechanisms is essential for the more strategic development of antiviral vaccines. This Special Issue summarizes recent advances in host genetic control of intracellular defense mechanisms, innate and adaptive immune responses, and their interactions in viral infections. We also welcome original research reports closely related to host–virus interactions and vaccine development.

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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.

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