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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Message from the Editor-in-Chief

Vaccines (ISSN 2076-393X) has had a 6-year history of publishing peer-reviewed state of the art research that advances the knowledge of immunology in human disease protection. Immunotherapeutics, prophylactic vaccines, immunomodulators, adjuvants and the global differences in regulatory affairs are some of the highlights of the research published that have shaped global health. Our open access policy allows all researchers and interested parties to immediately scrutinize the rigorous evidence our publications have to offer. We are proud to present the work and perspectives of many to contribute to future decisions concerning human health.

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