Special Issue

Advances in Antibody Based HIV-1 Vaccine Development

Message from the Guest Editors

Intensive collaborative work in the last decade resulted in the isolation of antibodies from a subset of HIVpositive patients, that can potently neutralize a broad spectrum of primary HIV-1 isolates in vitro and protect from infection in animal models, advancing these broadly neutralizing antibodies (bnAbs) to clinical trials in recent years. In parallel, detailed structural characterizations of bnAbs in complex with HIV-1 envelope proteins (Env) gave insights into particular features of these antibodies and their epitopes. Unfortunately, HIV-1 Env immunogens derived from this knowledge were not able to date to induce bnAbs upon vaccination of humans or non-human primates. However, they can do so in certain species like camelids or cows, which naturally generate antibodies with special characteristics of bnAbs. Detailed immunological studies are being performed to understand the generation of bnAbs in patients with the aim to recapitulate the underlying mechanisms in vaccination approaches.

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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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