Special Issue

Genetically Engineered Mouse Models in Vaccine Development

Message from the Guest Editors

Mice are the most common model for preclinical evaluation of vaccine safety and efficacy. However, there remain many challenges. Due to the strict host tropism, some pathogens do not naturally infect mice. Furthermore, the mouse immune system cannot reconstitute immune responses by humans. To overcome these problems, a number of recent studies have developed genetically engineered mice (GEM) to test vaccine security and immunogenicity. The use of GEMs has exponentially increased, including knockout mice lacking a murine restriction factor, transgenic mice expressing a viral entry factor, and humanized immune system mice with reduced graft-versus-host disease and functional human B and T cells. These GEMs allow a more physiological study of human-restricted pathogens and novel vaccines. In this Special Issue, we aim to introduce new GEM models and will discuss current progress and future perspectives related to these models in vaccinology. We look forward to receiving your contributions.

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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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