

Special Issue

State of the Art and Future Directions of Synthetic Biology-Armed Vaccine Development

Message from the Guest Editors

Synthetic biology provides novel approaches for rebuilding existing biological systems or redesigning new ones from scratch for various applications. Over time, the so-called “bottom-up” synthetic biology has expanded to many research subjects, including biology, chemistry, computational sciences, and engineering. The state-of-the-art concepts and strategies of synthetic biology can also activate and shape the future of vaccine development into the next generation. Thus, we would like to invite researchers worldwide to contribute to this Special Issue with recent advances in the vaccine/antibody production and mechanism study armed with rational designs from synthetic biology. We welcome high-quality mini-review and research articles with results from various host models aimed at either laboratory or industrial level. Articles on synthetic cell-based antigen display or drug delivery systems are also welcome.

Guest Editors

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Deadline for manuscript submissions

closed (30 November 2023)



Vaccines

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 7.7
Indexed in PubMed



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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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manuscripts are peer-reviewed and a first decision is provided to authors approximately 18.1 days after submission; acceptance to publication is undertaken in 2.8 days (median values for papers published in this journal in the second half of 2025).