



## Bioengineering in Vaccine Design and Delivery

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### Message from the Guest Editor

Dear Colleagues,

During vaccine development, it is essential to improve delivery and manufacturing methods to reach the safe, effective, and cost-effective vaccine production criteria.

Advances in bioengineering have made it possible to control the physicochemical properties of the vaccines for faster synthesis, improve the antigen presentation to get more robust immunogenicity of vaccines, and obtain safer vaccine formulas.

Recent developments in vaccine delivery include the development of various polymeric particles as vaccine carriers due to their high biocompatibility and biodegradability. It is also shown that biodegradable hyaluronic cryogel mediates sustained antigen and adjuvant release, leading to a durable immune response. Proof of concept studies in vitro and in vivo will also be considered.

Virus-like particles as vaccine carriers efficiently elicit the immune response and offer improved safety, especially for immunocompromised or elderly patients.

Scientists working on different strategies to improve vaccine effectiveness, safety, or manufacturing using bioengineering technology are welcome to submit their work to this Special Issue by August 2024.





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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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