



*vaccines*



an Open Access Journal by MDPI

## Computer-Aided Vaccinology: From Epitope Prediction to Reverse Vaccinology and Beyond

Guest Editors:

**Dr. Irene Righetto**

Synthetic Biology and  
Biotechnology Unit, Department  
of Biology, University of Padua,  
Padova, Italy

**Dr. Francesco Filippini**

Synthetic Biology and  
Biotechnology Unit, Department  
of Biology, University of Padua,  
Padua, Italy

Deadline for manuscript  
submissions:

**closed (31 January 2024)**

### Message from the Guest Editors

Dear Colleagues,

Vaccine development is one of the most appealing fields in biosciences. Vaccines' goal is to make the immune system able to face future infections. The discovery of vaccination, credited to Edward Jenner and Louis Pasteur, has led to global declines in morbidity and mortality from different infectious diseases. However, as the recent SARS-CoV2 virus pandemic has shown us, the rapid evolution of many pathogens constitutes a challenge to vaccine development in terms of host-pathogen interaction(s) and immunity generation. Bioinformatics plays a pivotal role in this research field, driving vaccine improvement in a limited period of time, thanks to advanced soft-computing methods such as artificial intelligence (AI) and deep learning. Exploring computational tools for immunoinformatics and their usage is the central topic of this Special Issue.



[mdpi.com/si/167647](https://mdpi.com/si/167647)

**Special** *Issue*



an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Ralph A. Tripp

Department of Infectious  
Diseases, College of Veterinary  
Medicine, University of Georgia,  
Athens, GA 30602-7387, USA

## 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.

## Author Benefits

**Open Access:** free for readers, with **article processing charges (APC)** paid by authors or their institutions.

**High Visibility:** indexed within **Scopus, SCIE (Web of Science), PubMed, PMC, Embase, CAPus / SciFinder, and other databases.**

**Journal Rank:** JCR - Q1 (Immunology) / CiteScore - Q1 (Pharmacology (medical))

## Contact Us

---

*Vaccines* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/vaccines](http://mdpi.com/journal/vaccines)  
[vaccines@mdpi.com](mailto:vaccines@mdpi.com)