Special Issue

Therapeutic and Diagnostic Applications of Structural Vaccinology

Message from the Guest Editor

Structural vaccinology (SV) methods that combine highresolution structural biology techniques with computational biology and immunological validation, can drive the design of better, protein-based vaccine components, endowed with improved biochemical and/or immunological properties.

Vaccine components can have secondary uses as serological diagnostic markers that detect their cognate antibodies, induced in subjects with prior exposure to the related pathogen. Presentation of diagnostic epitopes or whole antigens belonging to different infection stages and diseases can spur the design of Multiplex diagnostic tests, capable of rapidly detecting multiple diseases and infection progress. Recent advances in single particle cryo-electron microscopy and the ability to solve the structures of larger, more complex antigen structures will inevitably provide an increased repertoire of available antigen (and antigenantibody) structures; therefore, examples of SV are likely to increase in the near future. In this context, this Special Issue summarizes the current applications of Structural Vaccinology to both the design of novel therapeutics (vaccines) and diagnostics.

Guest Editor

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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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