



## Design and Evaluation of Molecular Adjuvants for Human and Veterinary Vaccines

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### Message from the Guest Editors

The progressive replacement of conventional live attenuated and inactivated whole cell vaccines with new generation of subunit vaccines based in purified, recombinant, syntetic and nucleic acid-based vaccines (DNA or RNA) has generally reduced reactogenicity but also immunogenicity. Therefore, adjuvants and delivery systems are key components that are used to optimize and to enhance the efficacy of vaccines. The majority of known adjuvants have been empirically identified any are often associated with adverse reactions. Adjuvant-induced toxicity considerably limits their use in human and veterinary vaccines. The reduced immunogenicity of new vaccine antigens and the need for safer vaccines have increased the importance of identifying single, well-defined adjuvants with known molecular targets and mechanisms of action for rational vaccine design.

This Special Issue focuses on current approaches and challenges to modulate the immune response with molecular adjuvants for vaccine improvement. This is a topic of intense current research in vaccinology.





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