

Special Issue on
Peptide-Based Immunotherapeutics and Vaccines 2017

CALL FOR PAPERS

An improved understanding of antigen presentation and recognition has enabled the development of new types of vaccines and immunotherapies based on synthetic peptides encompassing B- and T-cell epitopes. The design of such vaccines takes advantage of emergent computational and experimental technologies that facilitate the identification of epitopes within protein antigens.

Peptide-based vaccines offer several advantages over traditional vaccines. Chiefly, they allow the immune response to focus solely on relevant epitopes, avoiding those that lead to nonprotective responses, immune evasion, or unwanted side effects, such as autoimmunity. However, the development of effective peptide-based vaccines requires overcoming significant difficulties, including identifying optimal delivery routes, overcoming the low immunogenicity of peptides, combining different type of epitopes to engage the humoral and cellular arms of the adaptive immune response, and compensating for the poor population coverage of individual T-cell epitopes due to MHC restriction. Moreover, certain antigenic epitopes, specifically B-cell epitopes, are conformational and need to be mimicked by linear sequences or placed onto suitable spatial frameworks.

We invite authors to submit original research and review articles addressing any of these issues in the development of peptide-based vaccines against infectious diseases, cancer, allergy, and autoimmune diseases.

Potential topics include but are not limited to the following:

- ▶ New advances in epitope prediction and large-scale epitope discovery
- ▶ Current progress in characterizing peptide repertoires presented by tumor and antigen presenting cells
- ▶ New approaches for increasing peptide immunogenicity and optimizing the delivery of peptide-based vaccines
- ▶ Development of peptide-based vaccines for the treatment of infectious diseases
- ▶ Development of prophylactic and therapeutic peptide-based vaccines against cancer
- ▶ Peptide-based immunotherapy for allergic and autoimmune diseases

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jir/pbiv17/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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