Special Issue

Peptides with a Rationale: Smart Biomaterials for Biomedical Innovation

Message from the Guest Editors

Smart and adaptive, peptide-based biomaterials function as responsive systems that react and adapt to a range of physiological, chemical, and physical stimuli. Peptides can be designed and programmed to arrange into diverse supramolecular structures with different morphologies and dimensions. Peptide-based biomaterials are super-versatile due to their biocompatibility, tunability, and ability to mimic natural biological functions. Their main applications across biomedical fields include drug delivery, tissue engineering and regeneration, biosensing and diagnostics, antimicrobial coatings, and cancer therapy. This Special Issue will showcase design strategies and peptide chemistry approaches, detailed biophysical characterization, and in vitro and in vivo biological studies for developing innovative, application-specific biomaterials in the biomedical field with applications including neurological disorders, cancer treatment, and antibiotic resistance.

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Message from the Editor-in-Chief

The biomaterials field is one of the largest and fastest growing research areas both in the scientific community and in the industrial one. Biomaterials are the result of collaborations between different disciplines: chemistry, medicine, pharmacology, engineering and biology. The objective of this collaboration is to lead to the implementation of new devices to restore form and human body functions. The mission of the *Journal of Functional Biomaterials* (*JFB*) is to focus attention on physico-chemical characteristics and their importance in the interactions between biomaterials and living tissues. *JFB* seeks to publish studies on the preparation, performance and use of biomaterials in biomedical devices, as well as regarding their behavior in physiological environments. We are pleased to welcome you as our authors.

Editor-in-Chief

Prof. Dr. Pankaj Vadgama
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