Special Issue

Bio- and Nanomaterials for Tumor Therapy and Cancer Drug Delivery

Message from the Guest Editors

Tumor immunotherapy has emerged as a transformative modality in oncology; however, its clinical efficacy remains limited by the immunosuppressive tumor microenvironment, insufficient immune activation, and poor drug penetration. To overcome these challenges, both oncolytic microbes (including bacteria and viruses) and nanoparticle-based platforms have garnered increasing attention for their ability to stimulate robust anti-tumor immune responses. Oncolytic bacteria and viruses offer unique tumor-targeting capabilities and can directly induce immunogenic tumor cell death while remodeling the immune landscape. Meanwhile, nanomaterials provide versatile tools for targeted delivery of immunomodulators, controlled release, and enhanced accumulation in tumor tissues via the enhanced permeability and retention (EPR) effect or active targeting strategies.

This Special Issue aims to showcase cutting-edge advances in oncolytic microbial therapy and nanotechnology-enabled immunotherapy, with a focus on their individual roles in enhancing anti-tumor immune responses. Both original research and comprehensive review articles are welcome.

Guest Editors

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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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