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Biomaterials in Bone Reconstruction

Guest Editor:

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Message from the Guest Editor

Dear colleagues,

This Special Issue aims to focus on the current status and recent advances in biomaterials for bone reconstruction. Artificial bone must have sufficient mechanical and excellent biological properties. Bioengineered composite scaffolds consisting of multifunctional biomaterials with cells, growth factors and bioactive therapeutic agents have great promise for bone reconstruction. Smart stimulus-responsive materials have recently been researched to facilitate non-invasive and controllable dynamic repair or bone defects with the help of electrical, optical, ultrasound and thermal stimuli related to external physical triggers or disease microenvironments. To mimic the original structure of bone tissue, gradient porous scaffold structures were designed in the lattice form, truss structures and triply periodic minimal surface structures. Additionally, three-dimensional (3D) printing technologies allow for the specific fabrication of scaffolds with an appropriate size, shape and intrinsic structures. Considering the pivotal role of bone tissue, this Special Issue seeks innovative strategies to promote bone defect repair and regeneration.

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Editor-in-Chief

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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.

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