

## Special Issue

# Bone Tissue Engineering: Recent Advances and Translation to Clinical Application

### Message from the Guest Editors

In recent decades, advances in computer-assisted planning, three-dimensional (3D) printing technology, and bone tissue engineering (BTE) have offered promising novel treatment alternatives by employing biocompatible scaffold materials, autologous mesenchymal stem cells, and growth factors. Furthermore, the complex signaling cascade of the native immune system plays a crucial role in determining the efficacy and viability of the tissue-engineered implant. It forms an essential component of the BTE strategy. These approaches have provided a new platform for basic and translational research, and have exhibited promising results with regard to large bone regeneration that might profoundly improve patients' function, form, and quality of life.

This Special Issue aims to compile the recent advances in bone tissue engineering and their scientific and clinical applications. We welcome original research articles and comprehensive reviews that address the following topics: preclinical research; clinical trials; advances in biomaterials for bone tissue engineering; 3D printing and bioprinting technologies; and scaffold-immune system interactions.

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### Guest Editors

Dr. Fernando Guastaldi

Division of Oral and Maxillofacial Surgery, Department of Surgery, Massachusetts General Hospital, Harvard School of Dental Medicine, Harvard Medical School, Boston, MA, USA

Dr. Bhushan Mahadik

Prellis Biologics, San Francisco Bay Area, CA, USA

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### Deadline for manuscript submissions

closed (31 July 2025)



## Journal of Functional Biomaterials

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Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[jfb@mdpi.com](mailto:jfb@mdpi.com)

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## About the Journal

### 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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### Editor-in-Chief

Prof. Dr. Pankaj Vadgama

School of Engineering and Materials Science, Queen Mary University of London, London, UK

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