



Bone Tissue Engineering: Recent Advances and Translation to Clinical Application

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

Deadline for manuscript
submissions:

31 August 2024

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.





an Open Access Journal by MDPI

Editor-in-Chief

Prof. Dr. Pankaj Vadgama

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

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.

Author Benefits

Open Access: free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

High Visibility: indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [PubMed](#), [PMC](#), [Embase](#), [Inspec](#), [CAPus / SciFinder](#), [AGRIS](#), and other databases.

Journal Rank: JCR - Q2 (*Engineering, Biomedical*) / CiteScore - Q2 (*Biomedical Engineering*)

Contact Us

Journal of Functional Biomaterials
Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/jfb
jfb@mdpi.com
[X@JFB_MDPI](https://twitter.com/JFB_MDPI)