



Guest Editors:

Prof. Dr. Dr. Dr. Shahram Ghanaati

FORM-Lab (Frankfurt Orofacial Regenerative Medicine), Department for Oral, Cranio-Maxillofacial and Facial Plastic Surgery, University Hospital Frankfurt Goethe University, Frankfurt am Main, Germany

s.ghanaati@med.uni-frankfurt.de



From Passive Implants to Active Stimulation of Bone Regeneration

Message from the Guest Editors

In the last decades, the use of biomaterials for bone regeneration has gained increasing importance in trauma, oral, cranio-maxillofacial, and facial plastic surgery. Understanding the inflammatory pattern induced by biomaterials is a decisive factor for understanding the regenerative pattern and capacity of the used biomaterial and to define its clinical indications. In this regard, bone anatomy, biology, and metabolism build the local environment in which a biomaterial is implanted and predefine the pattern of the regeneration process. Different bone activities and atrophy conditions require tailored biomaterials to support bone regeneration on the long term, in harmony with the degradation pattern of the implanted biomaterial. In this sense, different resorbability profiles and the fabrication of biomaterials with controlled degradation kinetics that actively stimulate bone regeneration is of great interest for clinicians and biomaterial scientists. In addition, passive biomaterial integration within the regenerated bone provides mechanical stimulation and preserves the stability of the augmented region.

This Special Issue of the journal *Applied Sciences* entitled “From Passive Implants to Active Stimulation of Bone Regeneration” aims to cover recent research and novel developments of biomaterials in relation to different bone metabolism and atrophy conditions. It includes state-of-the-art research papers in addition to minireviews and reviews, which will provide a relevant collection of references for research in passive and active stimulation of bone regeneration by biomaterials.

Submission Deadline:

31 December 2018

Twitter: @applsci

LinkedIn: applsci@mdpi.com

<https://susy.mdpi.com>

High visibility (Open Access Journal; Indexed by the Science Citation Index Expanded)

Rapid publication (Manuscripts are peer-reviewed and a first decision is provided to authors approximately 19 days after submission)

Fair peer-review process (rejection rate: 70% in 2017)



mdpi.com/si/15640

Special Issue