



## Early Biological Reactions on Biomaterials Determining Long-Term Tissue Regeneration Effects

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### Message from the Guest Editors

Dear Colleagues,

After implantation of a biomaterial, a plethora of biological host reactions such as platelet-derived cytokine release, inflammatory or general early wound healing responses including adhesion of relevant cells and (neo-) angiogenesis take place, affecting local homeostasis. Some of these interactions have been topics of clinical and scientific discussion (e.g., the role of membranes in bone regeneration), while others are well understood (e.g., physical surface modification of implants). The goal is to specifically tailor tissue-implant interactions in order to achieve an improved and stable long-term tissue integration and regeneration. The focus of this Special Issue is interdisciplinary research on bioactive modifications of known and newly established (including 3D-printed) biomaterials with factors which are relevant for early tissue homeostasis, as well as the creation of a local wound environment that is optimal for the respective healing. In brief, methods are needed that allow the realistic and cost-efficient production of functionally improved biomaterials, contributing to patient care at a high level in the future.





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