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Design and Micromechanical Behavior of Orthopaedic Devices for Bone Repair and Regeneration

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Message from the Guest Editors

Although bone has the capacity of self-regenerating, there are a number of bone defects and fractures for which the support of an artificial device is required for complete bone regeneration. These orthopedic devices can be permanent, such as those for joint replacement, or temporary, such as some fixation plates and biodegradable bone scaffolds. The design and material of such devices must be carefully defined, in order to respond to their biomechanical demands. Therefore, the development of devices with controlled micromechanical behavior is essential to avoid device failure and lead to successful bone repair and regeneration.

This Special Issue aims to collect the most recent developments on the design of bone implant devices with controlled structure and material, focusing on their design, fabrication, and physical and biomechanical characterization.





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Message from the Editor-in-Chief

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