



Special Issue Reprint

Bone Regeneration and Repair Materials

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Bone is a specialized connective tissue with the ability to regenerate following injury and trauma. However, when the extension of bone loss exceeds the regenerative capacity of tissue, additional treatments are required; these have been investigated by scientists and clinicians, and include biological and material approaches and their combination. This Special Issue, entitled “Bone Regeneration and Repair Materials”, is composed of 14 original and 2 review articles that can be grouped into the following three categories: (1) physicochemical and mechanical characterizations of biomaterials for bone regeneration and implants; (2) strategies to induce bone repair using biomaterials and/or cells; and (3) titanium implants. This collection of information covers the diverse range of materials and approaches that have emerged as promising and powerful tools in regenerative medicine in order to promote bone repair, regeneration, and implant osseointegration. Additionally, this Special Issue elucidates the need to understand the cellular mechanisms involved in the interactions between bones and materials in the search for optimized and smart therapies, with patient well-being always being the primary focus.

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