







Special Issue Reprint

Scaffolds and Implants for Bone Regeneration

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Bone defects caused by trauma, tumor, infection and a variety of congenital diseases are among the most common orthopedic disorders, and the clinical management of non-union bone defects is still a challenge for orthopedic surgeons. In recent years, bone implants based on metals, ceramics, and polymers have been widely utilized and helped millions of patients. However, the rapid growth of the elderly demographic has tremendously intensified the occurrence of bone trauma cases, requiring once again the further development of effective strategies for bone reconstruction and regeneration. Therefore, the development of scaffolds and implants with new compositions, three-dimensional configurations, proper mechanical properties, and particular interactions with cells is highly expected. These new biomaterials may effectively promote bone regeneration and thus have a significant impact on individual patients and health care systems.

In this Special Issue, we would like to present an innovative perspective on the scaffolds and implants for bone regeneration. Topics will include but not be limited to, the following: scaffold design and fabrication; biocompatibility and biodegradability; host response to implants; cell–scaffold interactions; and scaffold-based drug delivery. Both original research articles and reviews are very welcome.



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