Special Issue

Biofunctionalized Scaffold in Regenerative Medicine

Message from the Guest Editors

The use of a biofunctionalized scaffold with cells and/or soluble factors has emerged as a promising approach in the field of regenerative medicine. A biomaterial refers to a matrix that provides a specific environment and support growth and development. An ideal scaffold must be biocompatible and non-toxic, and should improve cell viability, cell adhesion, and proliferation. Different scaffolds can be combined with cells, such as mesenchymal stem cells (MSCs) that can promote bone regeneration through the differentiation towards the osteogenic lineage or the release of specific soluble factors, or scaffolds can be primed with soluble molecules, including growth factors that can be delivered in the environment, performing a therapeutic action. The aim of this Special Issue is to give an overview of ongoing scientific research to better understand the molecular mechanisms involved in tissue regeneration and the evaluation of the aptitude of biofunctionalized scaffold for future clinical applications.

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Materials (ISSN 1996-1944) was launched in 2008. The journal covers twenty-five comprehensive topics: biomaterials, energy materials, advanced composites, advanced materials characterization, porous materials, manufacturing processes and systems, advanced nanomaterials and nanotechnology, smart materials, thin films and interfaces, catalytic materials, carbon materials, materials chemistry, materials physics, optics and photonics, corrosion, construction and building materials, materials simulation and design, electronic materials, advanced and functional ceramics and glasses, metals and alloys, soft matter, polymeric materials, quantum materials, mechanics of materials, green materials, general. *Materials* provides a unique opportunity to contribute high quality articles and to take advantage of its large readership.

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