Special Issue

Scaffold Materials for Tissue Engineering

Message from the Guest Editor

The discovery of bioactive glasses (BGs) in the late 1960s, intended to replace inert metal and plastic implants that were not well tolerated by the body, represents a remarkable milestone in the field of synthetic and resorbable bone grafts. This discovery has inspired many other investigations, aiming at further exploring the in vitro and in vivo performances of BGs and other inorganic bioactive materials based on calcium phosphates and or inorganic/organic composites by suitably mixing the inorganic components with biopolymer matrices aiming at better mimicking the mechanical behavior and properties of bone tissues. However, successful tissue engineering strategies typically involve a combination of cells and bioactive factors with an implantable porous biomaterial construct to provide an environment conducive to cell differentiation and proliferation. Keywords

- bioactive bone graft materials
- osteoinduction of hMSC
- porous constructs
- additive manufacturing techniques
- bioprinting

Guest Editor

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Deadline for manuscript submissions

closed (15 February 2019)

Materials

an Open Access Journal by MDPI

Impact Factor 3.2
CiteScore 6.4
Indexed in PubMed

mdpi.com/si/11464

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