
Symposium 1: ESB-TERMIS joint symposium

MULTIFUNCTIONAL BIOMATERIALS IN TISSUE ENGINEERING & REGENERATIVE MEDICINE

Organizers

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Chair

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Manuela E. Gomes, 3B's Research Group, Biomaterials, Biodegradables and Biomimetics, Department of Polymer Engineering, University of Minho, Portugal, megomes@dep.uminho.pt

Theme

Currently, scientific research and technological innovation in the medical device space is driven by multifunctional biomaterials. The driving hypothesis is that such materials will positively interact with the host and through their biophysical, biochemical and / or biological cargo will stimulate the innate reparative machinery, promoting that way functional repair and regeneration. This symposium will discuss recent advances and challenges in the field of multifunctional biomaterials (e.g. fabrication, functionalisation, localised and sustained release of biologics) for regenerative medicine purposes. The proposed symposium will also discuss regulatory compliance requirements and efficacy studies in preclinical and clinical setting that will bring the newly developed knowledge to technology readiness level suitable for clinical translation and commercialisation.

Invited Speakers

Multifunctional and stimuli-responsive biomaterial-cell systems for tissue engineering
Manuela E. Gomes, 3B's Research Group, Biomaterials, Biodegradables and Biomimetics, Department of Polymer Engineering, University of Minho, Portugal, megomes@dep.uminho.pt

Dual cross-linked hydrogels for tailoring cells spatial and temporal microenvironment
David Eglin, AO Research Institute Davos, Clavadelerstrasse 8, Davos, Switzerland, david.eglin@aofoundation.org

Direct induction of endochondral ossification by human bone marrow derived mesenchymal stromal cells in a functionalized hydrogel system

Chiara Stüdle, University Hospital Basel, University of Basel, Basel, Switzerland,
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Tissue grafts: Multifunctional implantable devices

Hector Capella-Monsonis, REMODEL, CÚRAM, NUI Galway, Ireland,
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