Tentative Outline

Special Thematic Issue for Current Drug Targets

Nanotechnology in biomedical applications

Guest Editors: Teresa Puig and Joaquim Ciurana

Aims & Scope:

The 21st century has seen a massive spring up in the applications of nanotechnology. Incorporation of functionalized and modified nanostructures in various biomedical applications has generated important research interest. The applications of nanotechnology in medicine and biomedical engineering are vast and spans areas such as implant and tissue engineering, diagnosis and therapy. There is a need in designing of nanotools, which can respond to the needs of health problems and develop more efficient biomedical approaches. The aim of this special issue in Current Drug Targets is reviewing the recent developments in nanobiotechnology with special emphasis on novel tissue engineered scaffolds and the development of nanonetworks as new communication tools for medical approaches. Nanomaterials are also at the leading edge of the rapidly developing field of nanotechnology. This issue tries to summarize the most recent developments in the field of applied nanomaterials in biomedicine. In addition, the safety aspects in the applications of nanotechnology to biomedical practical applications are also examined.

Keywords: 3D-bioprinting, materials, tissue engineering, drug delivery systems, biomedical engineering, scaffolds, biopolymers, stability, biodegradable, nanonetworks, computer networks, nanobiotechnology, health monitoring, toxicity, bioavailability, emerging treatments.

Subtopics:

The subtopics to be covered within this issue are listed below:

- Bioglass in 3D Printed Poly(propylene fumarate) Tissue Engineering Scaffolds
- Nanonetworks in biomedical applications
- Hybrid multi-layered scaffolds produced via Fused Deposition Modeling (FDM) and electrospinning technique for 3D cell culture tests
- Opportunities of bacterial nanocellulose to treat and repair damaged epithelial tissues
- Screening of additive manufactured scaffolds designs for breast cancer 3D cell culture and stem-like expansion

Schedule:

- ✧ Manuscript submission deadline: June 2018
- ✧ Peer Review Due: July 2018
- ✧ Revision Due: September 2018
- ✧ Announcement of acceptance by the Guest Editors: December 2018
- ✧ Final manuscripts due: December 2018

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