



BioMed Research International

Special Issue on
**Biomimetic Nanomaterial Design for Tissue
Engineering and Regenerative Medicine**

CALL FOR PAPERS

Tissue engineering and regenerative medicine is an exciting research area that aims at regenerative alternatives to harmed tissues for transplantation. Although it is recently found that stem cells have unique capabilities of self-renewal and multilineage differentiation to serve as a versatile cell source, nanomaterials have lately emerged as promising candidates in producing candidates for improving traditional tissue engineering materials. Importantly, these efforts have highlighted that nanomaterials exhibit superior biocompatible, mechanical, electrical, optical, catalytic, and magnetic properties compared to conventional materials and thus have helped to improve various tissue growth over.

Therefore, this special issue is intended to invite investigators majoring in tissue engineering and regenerative area to contribute review and original papers describing the present need and future challenges of biomaterials and discussing recent breakthrough nanomaterial designing efforts revolutionizing tissue engineering and regenerative medicine.

Potential topics include, but are not limited to:

- ▶ Different approaches employed for the design and fabrication of bioinspired and artificial nanomaterials for tissue engineering
- ▶ Pros and cons of using nanomaterials for 3D cell culture and tissue engineering
- ▶ Challenging part of fabrication techniques to overcome current pitfalls of old materials and latest development of clinical prospective nanomaterials
- ▶ 3D cell culture using nanostructured scaffolds or hydrogel matrix for clinical application
- ▶ Monitoring cell/tissue interactions in organ-on-chip model
- ▶ Reconstruction system for the regeneration of tissues using nanomaterials
- ▶ Development and functional assessment of constructed novel biomimetic scaffold
- ▶ Recent developments in synthesis and characterization of biomimetic nanocrystals

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/bmri/tissue.engineering/bndte/>.

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First Round of Reviews

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