



BioMed Research International

Special Issue on

Advances in Biomaterials for Stem Cell Engineering

CALL FOR PAPERS

The addition of stem cells to tissue engineering and regenerative medicine armamentarium has opened up new avenues with the potential of developing stem cell-based constructs for the regeneration of damaged or diseased tissues including certain cancers. Owing to their remarkable properties and translational potential, stem cells have now been taken up for clinical therapy or clinical trials. Extracellular microenvironment engineering holds great promise for the advancements in the stem cell research. Therefore, new generation of biomaterials including both natural and synthetic biomaterials are being developed for use as instructive extracellular microenvironments to mimic the regulatory function of natural extracellular matrices (ECMs).

These biomaterials are offering tremendous ways to modulate cellular microenvironment and provide tools to study the interaction of stem cells with their microenvironment and neighboring cells.

Biomaterials for stem cell engineering is an emerging field and a new subset in tissue engineering and regenerative medicine. The editors therefore feel that it is a right time to bring a special issue on the advances in biomaterials for stem cell engineering for the benefit of readers. This special issue is intended to present and discuss recent advancements and significance of the biomaterials in stem cell-based research and therapy. High quality original research articles as well as review articles are solicited.

Potential topics include, but are not limited to:

- ▶ Design and development of biomaterials for stem cell applications
- ▶ Three-dimensional culture of stem cells using biomaterial scaffolds
- ▶ Biomaterials for stem cell delivery
- ▶ Biomaterials in engineering stem cell microenvironment/niche
- ▶ Biomaterials in controlling stem cell fate and function
- ▶ Stem cell and biomaterials interaction
- ▶ Advances in biomaterials-driven stem cell regenerative medicine
- ▶ Generation of induced pluripotent stem cells using biomaterials platform

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

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First Round of Reviews

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