



Tissue Engineering Scaffolds in Regenerative Medicine

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Deadline for manuscript
submissions:

closed (31 October 2024)

Message from the Guest Editors

Though great progress has been made in medicine over the years, however, current clinical approaches are not enough to meet a significant number of clinical disorders due to disease, trauma, congenital abnormalities, or ageing. Organ or tissue transplantation is a standard therapy to treat these patients. Irony of fact that many of these people will die due to the paucity of donor organs and high processing cost involved in organ transplantation. In this regard, tissue engineering and regenerative medicine (TERM) is a game-changing area of medicine with the potential to fully heal damaged tissues and organs and is promoting the move towards “cells as pills”. Tissue engineering scaffolds – that mimic the native extracellular matrix (ECM) - play a vital role in providing an environment that facilitates cellular growth, differentiation, and maturation. However, it’s still a critical engineering challenge to design clinically relevant scaffolds in a congenial and sustainable approach. Moreover, we know little how mechanical properties of the scaffolds regulate various cellular processes such as cell division, stem cell differentiation and cancer progression.





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