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Tissue Engineered Models of Musculoskeletal Regeneration and Pathologies

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Message from the Guest Editors

The recent literature indicates that successful translational musculoskeletal research relies on appropriate models. Within this context, we need to critically assess the value of traditionally used model systems. From a translational medicine perspective, we have to increase the efficacy of our model systems. The concept of tissue engineering and regenerative medicine (TE&RM) offers the unique opportunity to move a step forward from simple tissue culture models to smart three-dimensional in vitro systems that incorporate not only healthy or diseased cells of interest but also their complex cellular and extracellular natural microenvironments. Moreover, the establishment of genetically altered immunocompromised murine hosts have made it possible to incorporate humanized complex multicellular and polyhierarchical tissue engineered organ systems to study human musculoskeletal diseases and regeneration under in vivo conditions. With the present Special Issue, we want to give you an overview of those new tissue engineered platforms that are potentially able to revolutionize the way we model human musculoskeletal disease and regeneration.



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Special Issue



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Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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