

Special Issue

Cell-ECM Interactions for Tissue Engineering and Tissue Regeneration

Message from the Guest Editors

It is increasingly appreciated that the extracellular matrix (ECM) provides not only structural support, but also dynamic signaling cues that influence cellular behavior. In the context of tissue engineering and tissue regeneration, the ECM plays a critical role in many aspects, including the regulation of cell survival, cellular reorganization, contractility, as well as in the regulation of engineered cardiovascular tissue formation and function. This issue explores cellular interactions with naturally derived ECMs, biomimetic materials, and synthetic hydrogels. For example, the ECMs can take the form of 3D porous scaffolds, bioinks for 3D bioprinting, or decellularized ECMs. We invite manuscripts that focus on how cell-ECM interactions lead to advances in tissue engineering or in vivo tissue regeneration, as well as in the improved understanding of the underlying molecular biology.

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