

Materials derived from decellularized tissues: new frontiers in regenerative medicine

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Tissue repair is a complex and highly regulated process needed for the correct healing and functional recovery of damaged tissues and organs. Innovative materials are reaching a high level of biocompatibility, not only in terms of cellular adhesion and repopulation but also, and more importantly, in guiding and maintaining the tissue functionality. Due to the ability to maintain the structural and biological properties of the native extracellular matrix, biomaterials derived from decellularized tissues are gaining an exceptional interest in the field of regenerative medicine. Moreover, the complexity of the decellularized tissue-derived matrices revealed the presence of matrix bound vesicles with an incredible regenerative potential, opening to new therapeutical approaches.