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Ligament Regenerative Engineering; 4 Conclusions; References; Prospects of Bioactive Chitosan-Based Scaffolds in Tissue Engineering and Regenerative Medicine ; Abstract ; 1 Introduction
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6 In Musculoskeletal Tissue Engineering7 Concluding Remarks; References; Chitosan-Based Scaffolds for Cartilage Regeneration ; Abstract ; 1 Introduction; 2 Characteristics of Cartilage Damage and Reconstruction; 3 Superiorities of Chitosan-Based Scaffolds for Cartilage Regeneration; 4 Chitosan-Based Hydrogels for Cartilage Regeneration; 4.1 Physically Cross-Linked Hydrogels with Chitosan as Matrix; 4.2 Chitosan-Based Chemically Cross-Linked Hydrogels; 5 3D Porous Chitosan-Based Scaffolds; 5.1 Normal 3D Porous Chitosan-Based Scaffolds; 5.2 Fibrous Scaffolds with Chitosan as Matrix
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Sommario/riassunto

The book is an excellent reference for scientists, researchers and students working in the field of areas of biopolymeric biomaterials, biomedical engineering, therapeutics, tissue engineering and regenerative medicine. The book is divided into two parts: Part I will focus on the tissue engineering and Part II focuses on therapeutics, functionalization and computer-aided techniques. The book consists of 13 chapters contributed by 20 international contributors who are leading experts in the field of biopolymers and its applications. It will focus on the advancements of chitin and chitosan in regenerative medicine. Regenerative medicine in tissue engineering is the process of replacing or regenerating human cells, tissues, or organs to restore or establish normal function. It is an incredibly progressive field of medicine that may, in the near future, help with the shortage of life-saving organs available through donation for transplantation vis-a-vis regenerative medicine focuses on therapeutics, functionalization and computer-aided techniques. It also covers physical and chemical aspects of chitin and chitosan, structural modifications for biomedical applications, chitosan based scaffolds and biomodelling in tissue engineering, nanomedicines and therapeutic applications. With the broad range of applications, the world is waiting for biopolymers to serve as the basis for regenerative medicine and biomedical applications.