

Χαρακτηριστικά:

- Provides an updated overview of tendon biology, disease, and tissue engineering approaches
- Presents new subjects, namely experimental models and translational chapters not included in the first edition, due to limited literature on tendon regeneration
- Written by renowned scientists, engineers, and clinicians from around the world

Περιεχόμενα:

Section I Biology and Physiology of Tendons

1. Regenerating Tendons: Lessons from Development
2. Mechanobiology of Embryonic and Adult Tendons and Tendon Interfaces
3. Tendon Physiology and Mechanical Behavior Structure-Function Relationships
4. Tendon Resident Cells - Functions and Features
5. Molecular and Biological Mechanisms of Tendon Homeostasis and Repair

Section II Pathologies and Repair of Tendons

6. Tendinopathy Triad - Mechanosensitizing, ECM, and Inflammation
7. Medical Considerations in Tendinopathy
8. Etiology, Pathology, and Healing of Tendon Injury and Disease
9. Mechanics and Mechanisms of Tendon Disease and Regeneration
10. Tendon Aging and Degeneration
11. The Veterinarian Perspective: Comparative Anatomy, Animal Models and Bioengineering of Tendons

Section III Tendon Tissue Engineering and Regenerative Medicine Approaches

12. Cell-Based Approaches for Tendon Regeneration
13. Engineering Anisotropic 2D and 3D Structures for Tendon Repair and Regeneration
14. Fabrication of Hierarchical and Biomimetic Fibrous Structures to Support the Regeneration of Tendon Tissues
15. Multifactorial Tendon Tissue Engineering Strategies
16. Tendon Interface Engineering Approaches

Section IV Translating Tendon Regenerative Medicine Strategies

17. Transitional Tendinopathy: Are We There Yet?
18. Translational Challenges at the Interfaces