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Nota di contenuto	<p>1. An introduction to tissue engineering; the topic and the book Jorge Alfredo Uquillas, Lorenzo Moroni and Jan de Boer -- 2. Stem cells Mark F. Pittenger and Candace L. Kerr -- 3. Tissue formation during embryogenesis Marcel Karperien, Bernard A.J. Roelen, Robert Passier and Susan Gibbs -- 4. Cellular signaling Vanessa LaPointe and Kristopher A. Kilian 5. Extracellular matrix as a bioscaffold for tissue engineering Brian M. Sicari, Ricardo Londono, Jenna L. Dziki and Stephen F. Badylak -- 6. Synthetic biomaterials Ana A. Aldana, Jurica Bauer and Matthew B. Baker -- 7. Degradation of biomaterials Clara Grace Hynes, Emily Morra, Pamela Walsh and Fraser Buchanan -- 8. Cell-material interactions Hannah Donnelly, Steven Vermeulen, Monica Tsimbouri and Matthew J. Dalby 9. Biomaterials discovery: experimental and computational approaches Andrew L. Hook, Aurelie Carlier, Morgan R. Alexander and David A. Winkler -- 10. Microfabrication technology in tissue engineering Minghao Nie, Roman Truckenmuller and Shoji Takeuchi -- 11. Scaffold design and fabrication Dietmar W. Hutmacher, Biranche Tandon and Paul D. Dalton -- 12. Controlled release strategies in tissue engineering Jeffrey J. Rice, Mikael M. Martino, Sharan Bobbala, Evan A. Scott and Jeffrey A. Hubbell 13. Bioreactors: enabling technologies for research and manufacturing Dominik Egger, Sabrina Nebel, Marius Gensler, Sebastian Krebs, Jan Hansmann and Cornelia Kasper -- 14. Strategies to promote vascularization, survival, and functionality of engineered tissues Miriam Filippi, Thomas Spater, Marietta Herrmann, Matthias W. Laschke, Arnaud Scherberich and Sophie Verrier -- 15. Skin tissue engineering and keratinocyte stem cell</p>

therapy Rosalind Hannen, John Connelly, Simon Myers and Nkemcho Ojeh -- 16. Cartilage and bone regeneration Anders Lindahl, Mats Brittberg, David Gibbs, Jonathan I. Dawson, Janos Kanczler, Cameron Black, Rahul Tare and Richard OC. Oreffo -- 17. Tissue engineering of the nervous system Paul D. Dalton, Kelly L. O'Neill, Ana Paula Pego, Giles W. Plant, David R. Nisbet, Martin Oudega, Gary A. Brook and Alan R. Harvey -- 18. Principles of cardiovascular tissue engineering Saray Chen and Smadar Cohen -- 19. Tissue engineering of organ systems Adam M. Jorgensen and Anthony Atala -- 20. Product and process design: scalable and sustainable tissue-engineered product manufacturing Evan Claes, Tommy Heck, Maarten Sonnaert, Filip Donvil, Anais Schaschkow, Tim Desmet and Jan Schrooten -- 21. Clinical translation Johan Joly, Marina Marechal, Dieter Van Assche, Malcolm Moos, Jr. and Frank P. Luyten.

Sommario/riassunto

Tissue Engineering, Third Edition provides a completely revised release with sections focusing on Fundamentals of Tissue Engineering and Tissue Engineering of Selected Organs and Tissues. Key chapters are updated with the latest discoveries, including coverage of new areas (skeletal TE, ophthalmology TE, immunomodulatory biomaterials and immune systems engineering). The book is written in a scientific language that is easily understood by undergraduate and graduate students in basic biological sciences, bioengineering and basic medical sciences, and researchers interested in learning about this fast-growing field.
