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Titolo	Natural Product Inspired Scaffolds : Applications in Tissue Engineering / / edited by Mohit Kumar, Deepika Kathuria, Ajay Sharma
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ISBN	981-9731-11-9
Edizione	[1st ed. 2024.]
Descrizione fisica	1 online resource (308 pages)
Disciplina	610.28
Soggetti	Biology Biotechnology Regenerative medicine Biological Sciences Regenerative Medicine and Tissue Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Chapter 1_ Introduction to Natural Product Based Tissue Engineering -- Chapter 2_ Fabrication strategies for synthesis of natural product-based scaffold -- Chapter 3_ Applications of Natural Product based Scaffold in Tissue Engineering -- Chapter 4_ Natural Gums (Xanthan, Gellan, Arabic, Guar, Ghatti Gum, etc.) Based Bio-Scaffold and Their Application in Tissue Engineering -- Chapter 5_ Natural Product Loaded Chitosan and Collagen Based Bio-Scaffold and their Applications -- Chapter 6_ Natural Product-Loaded PCL and PLA-Based Bio-Scaffold and Their Applications -- Chapter 7_ Applications of Bio-Scaffolds in Plastic Surgery -- Chapter 8_ Bio-Scaffold and their Applications in Tissue Regeneration (Bone, Skin and Nerve Tissue Regeneration) -- Chapter 9_ Applications of Natural Product Loaded Scaffold for Wound Healing -- Chapter 10_ Enhancing Breast Reconstruction with Bio-Scaffolds - A Supportive Approach for Optimal Outcomes -- Chapter 11_ Toxicological and regulatory aspects of natural product based bio-scaffold.
Sommario/riassunto	The book explains the use of natural products as scaffolds in tissue engineering. It presents an introduction to the concept of natural product-based scaffolds and explores various fabrication strategies for

their synthesis. The book highlights the wide range of applications of these scaffolds in tissue engineering, including their use in tissue regeneration, wound healing, plastic surgery, and breast reconstruction. Specific natural products, such as gums (xanthan, gellan, arabic, guar, ghatti gum), chitosan, collagen are discussed in separate chapters. In addition, various application of natural product loaded PCL and PLA scaffolds have also been discussed. Each chapter focuses on the application of these natural product based scaffolds and explores their potential in tissue engineering. It also covers specific applications of these scaffolds in tissue regeneration, including angiogenesis, bone, skin, and nerve tissue regeneration. The book addresses important considerations regarding the toxicity and regulatory aspects of natural product-based scaffolds and explores the challenges associated with their implementation and emphasizes the need for safety and compliance in their use. Overall, the book provides a comprehensive overview of the field. It serves as a valuable resource for researchers, scientists, and professionals in the field of tissue engineering.