1. Record Nr. UNINA9910272159303321

Autore	Antonucci, Rocco
Titolo	Arte e/o design / Rocco Antonucci ; prefazione di Ugo Volli
Pubbl/distr/stampa	Milano ; Udine : Mimesis, 2016
ISBN	978-88-575-3658-3
Descrizione fisica	322 p. : ill. ; 21 cm
Collana	Mimesis. Design ; 1
Disciplina	745.201
Locazione	FARBC
Collocazione	ART.FI B 500
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910141298103321

Titolo	Biomimetic, bioresponsive, and bioactive materials : an introduction to integrating materials with tissues / / edited by Matteo Santin, Gary Phillips
Pubbl/distr/stampa	Hoboken, N.J., : Wiley, c2012
ISBN	9786613619280 9781280589454 1280589450 9781118129890 111812989X 9781118129906 1118129903 9781118129876 1118129873
Edizione	[1st ed.]
Descrizione fisica	1 online resource (249 p.)
Classificazione	SCI007000
Altri autori (Persone)	SantinMatteo PhillipsGary
Disciplina	660.6
Soggetti	Biomimetic polymers Biomimetics Tissues - Mechanical properties

Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Biomimetic, Bioresponsive, and Bioactive Materials; CONTENTS; PREFACE; CONTRIBUTORS; 1: HISTORY OF BIOMIMETIC, BIOACTIVE, AND BIORESPONSIVE BIOMATERIALS; 1.1 THE FIRST GENERATION OF BIOMATERIALS: THE SEARCH FOR "THE BIOINERT"; 1.1.1 Bioinert: Myth, Reality, or Utopia?; 1.2 THE SECOND GENERATION OF BIOMATERIALS: BIOMIMETIC, BIORESPONSIVE, BIOACTIVE; 1.2.1 Hydroxyapatite (HA) and Bioglass®: Cell Adhesion and Stimulation; 1.2.2 Collagen, Fibrin Glue, and Hyaluronic Acid Hydrogels: Presenting the ECM; 1.2.3 Chitosan and Alginate: Replacing the ECM 1.2.4 Poly(Lactic/Glycolic) Acid Copolymers: Encouraging Tissue Remodeling by Safe Biodegradation1.2.5 Porous Metals: Favoring Mechanical Integration; 1.3 THE THIRD-GENERATION BIOMATERIALS: BIOMIMICKING NATURAL BIOACTIVE AND BIORESPONSIVE PROCESSES; 1.3.1 Principal Phases of Tissue Regeneration; 1.3.1.1 Cell Adhesion: The Cornerstone of Tissue Regeneration; 1.3.1.2 Mechanisms of Tissue Mineralization; 1.4 PRINCIPLES OF BIOMIMESIS AND BIOACTIVITY; 1.4.1 Biomimicking of the ECM; 1.4.2 Biomimicking of Cell Membrane Components; 1.4.3 Biomimicking Cell Signaling Pathways 1.4.3.1 Modulation of the Growth Factor Signaling by Gene Expression: Bioactive Gene Delivery Systems1.5 BIOACTIVE BIOMATERIALS FROM DIFFERENT NATURAL SOURCES; 1.5.1 Silk Fibroin; 1.5.2 Soybean-Based Biomaterials; 1.6 SCOPE OF THIS BOOK; REFERENCES; 2: SOFT TISSUE STRUCTURE AND FUNCTIONALITY; 2.1 OVERVIEW; 2.2 EPITHELIAL TISSUE; 2.2.1 Background; 2.3 THE SKIN; 2.3.1 Structure and Functionality; 2.3.2 Repair, Healing, and Renewal; 2.4 MUSCLE TISSUE; 2.4.1 Background; 2.4.2 Skeletal Muscle; 2.4.2.1 Structure and Functionality; 2.4.2.2 Repair, Healing, and Renewal; 2.4.3 Smooth Muscle 2.4.3.1 Structure and Functionality2.4.3.2 Repair, Healing, and Renewal; 2.4.4 Cardiac Muscle; 2.4.4.1 Structure and Functionality; 2.4.4.2 Repair, Healing, and Renewal; 2.5 CONNECTIVE TISSUE; 2.5.1 Background; 2.5.2 Embryonic Connective Tissue; 2.5.3 Connective Tissue Proper; 2.5.3.1 Cells of the Connective Tissue Proper; 2.5.3.2 Connective Tissue Proper Fibers; 2.5.3.3 Ground Substance; 2.5.4 Specialized Connective Tissues; 2.5.4.1 Structure and Function; 2.5.4.2 Repair, Healing, and Renewal of Hyaline Cartilage; 2.6 THE FOREIGN BODY RESPONSE; EXERCISES/QUESTIONS FOR CHAPTER 2; REFERENCES 3: HARD TISSUE STRUCTURE AND FUNCTIONALITY3.1 DEFINITION OF HARD TISSUES; 3.2 ARTICULAR CARTILAGE; 3.2.1 Structure of the Articular Cartilage; 3.2.2 Specific Mechanism Repair of the Articular Cartilage; 3.3 BONE TISSUE; 3.3.1 The Structure of the Bony Tissues; 3.3.2 The Functions of Bone Tissue; 3.3.3 Cell Types Involved in Bone Homeostasis: The Osteoblasts and the Osteoclasts; 3.3.4 Ossification, Turnover, and Remodeling; 3.3.5 Bone Composite Structure and Its Effect on Mechanical Performance; 3.4 CONCLUDING REMARKS; EXERCISES/QUESTIONS FOR CHAPTER 3; REFERENCES 4: BIOMEDICAL APPLICATIONS OF BIOMIMETIC POLYMERS: THE PHOSPHORYLCHOLINE-CONTAINING POLYMERS

Sommario/riassunto

"This comprehensive introduction to biomaterials discusses how materials are selected, designed, and modified for integration with living tissue. Biomaterials have applications in tissue engineering, medical devices, orthopedics, and other areas. This guide examines the physico-chemical properties of widely used biomaterials and cites examples of their uses in different clinical applications. Topics covered include soft and hard tissue replacement; biointeractive metals, polymers, and ceramics; and in vitro, in vivo, and ex vivo biocompatibility tests and clinical trials. This text is for students as well as professionals new to the field"--