1. Record Nr. UNINA9911020108603321 Autore Minuth W. W (Will W.) Titolo Tissue engineering: essentials for daily laboratory work / / W.W. Minuth, R. Strehl, K. Schumacher Weinheim;; [New York],: Wiley-VCH, c2005 Pubbl/distr/stampa **ISBN** 9786610519859 9781280519857 1280519851 9783527604784 3527604782 9783527604562 3527604561 Descrizione fisica 1 online resource (328 p.) Altri autori (Persone) StrehlR (Raimund) SchumacherK (Karl) Disciplina 571.538 Soggetti Tissue engineering Tissue culture Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references (p. 303-305) and index. Nota di bibliografia Nota di contenuto Tissue Engineering; Preface; Contents; 1 Developmental processes; 2 Cells and Tissue; 2.1 The Cell; 2.1.1 The Cell as a Functional Unit; 2.1.2 Plasma Membrane; 2.1.3 Nucleus; 2.1.4 Mitochondria; 2.1.5 Endoplasmic Reticulum (ER); 2.1.6 Golgi Apparatus; 2.1.7 Endosomes, Lysosomes and Peroxisomes; 2.1.8 Cytoskeleton; 2.1.9 ECM; 2.1.10 Cell Cycle; 2.2 Tissue Types; 2.2.1 Epithelia; 2.2.1.1 Building Plans of Epithelia; 2.2.1.2 Glands; 2.2.1.3 Epithelia in Sensory Perception; 2.2.2 Connective Tissue; 2.2.2.1 Variety; 2.2.2.2 Fat Tissue as Storage; 2.2.2.3 Bone and Cartilage as Support Tissue 2.2.3 Muscle Tissue2.2.3.1 Cell Movement: 2.2.3.2 Rhythmic Contraction; 2.2.3.3 Unconscious Contraction; 2.2.4 Nervous System Tissue; 2.2.4.1 Information Mediation; 2.2.4.2 Networks and Connections; 2.3 Relevance of the ECM; 2.3.1 Components of the ECM; 2.3.1.1 Functions of the ECM; 2.3.1.2 Synthesis of the Collagens;

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## Sommario/riassunto

Comprehensive in its scope and illustrated in detail, this practical book provides a fundamental insight into the complex world of tissue development and artificial cell culture using tissue engineering. The introductory chapters cover basic cell biology and cellular development as well as cell culture, with a main emphasis on ways of differentiating tissue and the critical evaluation of the properties of maturing tissue constructs. The authors also focus on the use of stem cells from the most varied sources in tissue engineering. The whole is rounded off by an exceptionally wide-rangin