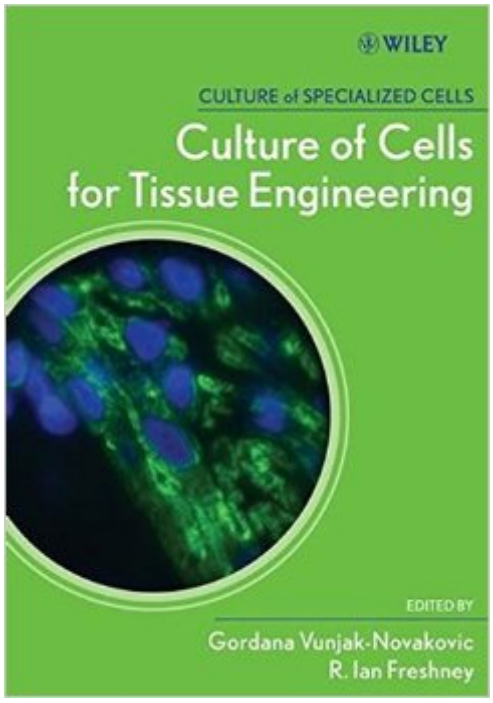
Culture Of Cells For Tissue Engineering



Synopsis

Step-by-step, practical guidance for the acquisition, manipulation, and use of cell sources for tissue engineering Tissue engineering is a multidisciplinary field incorporating the principles of biology, chemistry, engineering, and medicine to create biological substitutes of native tissues for scientific research or clinical use. Specific applications of this technology include studies of tissue development and function, investigating drug response, and tissue repair and replacement. This area is rapidly becoming one of the most promising treatment options for patients suffering from tissue failure. Written by leading experts in the field, Culture of Cells for Tissue Engineering offers step-by-step, practical guidance for the acquisition, manipulation, and use of cell sources for tissue engineering. It offers a unique focus on tissue engineering methods for cell sourcing and utilization, combining theoretical overviews and detailed procedures. Features of the text include: Easy-to-use format with a two-part organization Logically organizedâ ”part one discusses cell sourcing, preparation, and characterization and the second part examines specific engineered tissues Each chapter covers: structural and functional properties of tissues, methodological principles, culture, cell selection/expansion, cell modifications, cell seeding, tissue culture, analytical assays, and a detailed description of representative studies End-of-chapter features include useful listings of sources for reagents, materials, and supplies, with the contact details of the suppliers listed at the end of the book A section of elegant color plates to back up the figures in the chapters Culture of Cells for Tissue Engineering gives novice and seasoned researchers in tissue engineering an invaluable resource. In addition, the text is suitable for professionals in related research, particularly in those areas where cell and tissue culture is a new or emerging tool.

Book Information

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Tissue Engineering I: Scaffold Systems for Tissue Engineering (Advances in Biochemical Engineering/Biotechnology) (v. 1) Culture of Cells for Tissue Engineering Flourescence Microscopy of Living Cells in Culture, Part A, Volume 29: Fluorescent Analogs, Labeling Cells, and Basic Microscopy (Methods in Cell Biology, Vol) (Vol 29) Metabolic Activation and Toxicity of Chemical Agents to Lung Tissue and Cells Soft Tissue Injuries and Hard Ball Tactics: Dealing With Soft Tissue Injuires and Insurance Companies Tissue Engineering: Engineering Principles for the Design of Replacement Organs and Tissues Biomimetic Materials And Design: Biointerfacial Strategies, Tissue Engineering And Targeted Drug Delivery (Manufacturing Engineering & Materials Processing) Tissue Culture Techniques: An Introduction Plant Tissue Culture: A Classified Bibliography (Developments in Crop Science) Principles of Tissue Engineering, 4th Edition Orthodontically Driven Corticotomy: Tissue Engineering to Enhance Orthodontic and Multidisciplinary Treatment Laser-Tissue Interactions: Fundamentals and Applications (Biological and Medical Physics, Biomedical Engineering) Semiconductors for Solar Cells (Artech House Optoelectronics Library) The Physics of Solar Cells (Properties of Semiconductor Materials) Copper Zinc Tin Sulfide-Based Thin Film Solar Cells Synergy, It’s an Essential Oil Thing: Revealing the Science of Essential Oil Synergy with Cells, Genes, and Human Health Secrets of Your Cells: Discovering Your Body’s Inner Intelligence The Wisdom of Your Cells: How Your Beliefs Control Your Biology Stem Cells: A Very Short Introduction Cord Blood Stem Cells Medicine