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Altri autori (Persone)	DanquahMichael K MahatoRam I
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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	The Mechanism of Stem Cell Differentiation into Smooth Muscle Cells -- Recent Advances in Embryonic Stem Cell Engineering Towards Tailored “Lineage Differentiation -- Human Amniotic Membrane: A Potential Tissue and Cell Source for Cell Therapy and Regenerative Medicine -- Novel Strategies Applied to Provide Multiple Sources of Stem Cells as a Regenerative Therapy for Parkinson’s Disease -- Hair Follicle: A Novel Source of Stem Cells for Cell and Gene Therapy -- Genetically Modified Stem Cells for Transplantation -- Induced Pluripotent Stem Cells: Basics, and the Application in Disease Model and Regenerative Medicine -- Gene Transfer to the Heart. Emerging Strategies for the Selection of Vectors, Delivery Techniques and Therapeutic Targets -- Cell-Based Therapy for Cardiovascular Injury -- Induced Pluripotent Stem Cells: New Advances in Cardiac Regenerative Medicine -- Dendritic Cells for Cancer Immunotherapy -- Mesenchymal stem cells: prospects for cancer therapy -- RNA Interference for Oncology: Clinical Prospects Beyond the Hype -- Cell Therapy using Adult Stem Cells in Osteonecrosis and Nonunion Fractures -- Stem Cell

Therapies for the Treatment of Spinal Cord Injuries: Current Progress in Basic Science and Clinical Research -- Pluripotent Stem Cells for Neural Regeneration -- Synovial Mesenchymal Stem Cells and their Applications in Musculoskeletal Regeneration -- Stem Cell Therapy Aided liver Regeneration -- Application of Microfluidics of Study Stem Cell Dynamics -- Stem Cell Therapy Aided liver Regeneration -- Application of Microfluidics of Study Stem Cell Dynamics -- Stem Cell Therapy Aided liver Regeneration -- Application of Microfluidics of Study Stem Cell Dynamics -- Biomimetic Multiscale Topography for Cell Alignment -- Spinal Cord Repair by Means of Tissue Engineered Scaffolds -- Stem Cells in Ligament Tissue Engineering -- Biomaterials for Bone Tissue Engineering -- Gene Therapy for the Inner Ear: Progress and Prospects -- Preclinical Studies on Growth Plate Cartilage Regeneration Using Chondrocytes or Mesenchymal Stem Cells -- Cell and Gene Transfer Strategies for Vascularization During Skin Would Healing.

Sommario/riassunto

Examples from various organs and diseases illustrate the potential benefit obtained when both therapeutic approaches are combined with delivery strategies. Representing the combined effort of several leading international research and clinical experts, this book, Emerging Trends in Cell and Gene Therapy, provides a complete account on and brings into sharp focus current trends and state-of-the-art in important areas at the interface of cell- and gene-based therapies. This book addresses the current fragmented understanding regarding these two research areas and fills the vast unmet educational need and interest of both students and researchers in academia and industry. Main features of the book: · Biological aspects of stem cell sources, differentiation and engineering. · Application of microfluidics to study stem cell dynamics · Potential clinical application of stem cells and gene therapy to specific human disease. · Utilization of biomaterials and stem cells in regenerative medicine with particular emphasis on spinal cord repair, ligament and bone tissue engineering. · Biomimetic multiscale topography for cell alignment.