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Nota di contenuto	Chapter 1. Cellular Architects of Healing: A History of Cell Therapy in Medicine -- Chapter 2. Embryonic Stem Cells: The Dawn of Regenerative Promise -- Chapter 3. Mesenchymal stem cells -- Chapter 4. Bone Marrow-derived Mononuclear Cells and Umbilical Cord Blood-Derived Mononuclear Cells -- Chapter 5. iPSC Technology Applying in Drug Discovery -- Chapter 6. Biology of Extracellular Vesicles from Mesenchymal Stem Cell -- Chapter 7. Cell Therapy for Cerebral Palsy -- Chapter 8. Cell Therapy for Autism Spectrum Disorders -- Chapter 9. Cell Therapy for Spinal Cord Injury -- Chapter 10. Cell Therapy for Spina Bifida -- Chapter 11. Cell Therapy for Traumatic Brain Injury -- Chapter 12. Cell Therapy for Cerebral Stroke -- Chapter 13. Cell Therapy for Liver Cirrhosis -- Chapter 14. Cell

Therapy for Biliary Atresia -- Chapter 15. Cell Therapy for Diabetes Mellitus -- Chapter 16. Stem Cell Therapy for Myocardial Infarction, Non-ischemic Cardiomyopathies and Heart Failure -- Chapter 17. Cell therapy for Chronic Obstructive Pulmonary Disease -- Chapter 18. Stem cell therapy for Treatment of Bronchopulmonary Dysplasia -- Chapter 19. Cell Therapies for Cartilage Repair and Osteoarthritis -- Chapter 20. Cell Therapy for Ovarian Deficiency and Female Sexual Dysfunction -- Chapter 21. Cell Therapy for Testosterone Deficiency and Male Sexual Dysfunction -- Chapter 22. Stem Cell-based Therapy for Treatment of Frailty -- Chapter 23. Clinical Applications of Exosomes -- Chapter 24. iPSC Technology Applying in Cell Therapy.

Sommario/riassunto

This book provides an overview of cell-based therapy for human diseases including the definition, history, and clinical applications of human stem cells and their use in regenerative medicine. It covers human pluripotent stem cells (human embryonic stem cells and human induced pluripotent stem cells), mesenchymal stem/stromal cells, and hematopoietic stem cells, bone marrow mononuclear cells. In terms of clinical applications, this book also provides an update on recent human trials using these cells to treat various diseases, including neurological disorders, pulmonary dysfunctions, metabolic/endocrine-related diseases, frailty, and cancer treatment. In addition, it discusses the authors' clinical trial experiences related to these conditions in a clinical setting to provide additional insight into regenerative medicine, especially cell-based therapy. The field of regenerative medicine has witnessed tremendous advancement in stem cell research and therapy in recent years, with thousands of preclinical studies supporting thousands of human clinical trials conducted worldwide. Emerging evidence in regenerative medicine and stem cell research suggests the treatments are safe, whereas their therapeutic potential, effectiveness, and mode of action require deeper investigation. It is important to introduce the science behind stem cell-based therapy to patients, clinicians, and researchers to further enhance understanding of responsible clinical conduct and so to educate and thus prevent the further emergence of unregulated, deceitful stem cell clinics solely operating for the sake of profit. .
