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Altri autori (Persone)	ChaseLucas G VemuriMohan C
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Nota di contenuto	Scaling-up Ex-vivo Expansion of Mesenchymal Stem/Stromal Cells for Cellular Therapies -- Mesenchymal Stromal Cell Mechanisms of Immunomodulation and Homing -- Mesenchymal Stem Cell Exosomes: The Future MSC-based Therapy? -- The Biology of Mesenchymal Stem Cells in Health and Disease and its Relevance to MSC-based Cell Delivery Therapies -- Pulmonary Clinical Applications for Mesenchymal Stem Cells -- Stem Cell Therapy for Bone Disorders -- Mesenchymal Stem Cell Therapies for Bone and Tendon Conditions -- Mesenchymal Stromal Cells (MSC) and the Repair of Cartilage Tissue -- Mesenchymal Stem Cells and Haematopoietic Stem Cell Culture -- Mesenchymal Stem Cells for Treatment and Prevention of Graft-Versus-Host Disease and Graft Failure after Hematopoietic Stem Cell Transplantation and Future Challenges -- Mesenchymal Stromal Cell Therapy in Crohn’s Disease -- Application of Mesenychymal Stem Cells in Amyotrophic Lateral Sclerosis -- Mesenchymal Stem Cell Therapy for Heart Disease -- Advances in Lentivector-based Cell Therapy with Mesenchymal Stem Cells -- Genetically Engineered Mesenchymal Stem Cells for Cell and Gene Therapy -- Optimal Tissue Sources of Mesenchymal Stromal Cells for Clinical Trials -- Regulatory Considerations Applicable to Manufacturing of Human Placenta-derived Mesenchymal Stromal Cells (MSC) Used in Clinical Trials in Australia and Comparison to USA and European Regulatory Frameworks -- Mesenchymal Stem Cell Therapy

	for Peripheral Vascular Diseases -- Mesenchymal Stromal Cells in the Clinic: What do the clinical trials say?.
Sommario/riassunto	Mesenchymal Stem Cells or Multipotent Mesenchymal Stromal Cells (collectively referred to as MSCs) are currently being tested in a number of clinical trials for various diseases including graft-versus-host disease, Crohn's disease, myocardial infarction, stroke, diabetes, cartilage defects, and many others. The increasing number of clinical trials globally indicates the likely therapeutic potential of this specialized adult stem cell. Over the last decade, there has been tremendous progress towards understanding an MSC's phenotype, expansion features in culture, differentiation ability and global gene and protein expression profiles. Despite the enormous progress and data accrual at the molecular and cellular levels, several questions remain as to the utility of MSCs for clinical applications. Mesenchymal Stem Cell Therapy is a comprehensive collection of information comprised of both basic and pre-clinical biological studies as well as current advances in clinical applications within the MSC therapy field. This text is a resource for both the basic life science and cell therapy researchers and includes a spectrum of review chapters from top experts in the field discussing clinical scale culture, regulatory issues, genetic engineering, disease specific applications and others.