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Titolo	Handbook of cardiac stem cell therapy [[electronic resource] /] / edited by Ioannis Dimarakis ... [et al.]
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Altri autori (Persone)	DimarakisIoannis
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Nota di contenuto	3. Embryonic Stem Cells and Their Therapeutic Potential Tomo Sari c, Shuhua Chen, Naidu Kamiseti, Marcel Halbach, Michael Xavier Doss, Johannes Winkler, Jurgen Hescheler and Agapios Sachinidis Embryonic Stem Cells; ES Cell-Derived Cardiomyocytes; Generation of cardiomyocytes from ES cells; Functional characteristics of ES cell-derived cardiomyocytes; Animal models of cardiomyocytes derived from ES cells; Other Animal Models for ES Cell-Based Therapeutics; Models for neural diseases; Models for therapy for type I diabetes mellitus; Animal models for liver and kidney regeneration Cell replacement therapy for other organ systems Barriers to Successful Use of ES Cell-Based Therapies; Ethical concerns; Safety concerns and purity; Rejection of allogeneic cells; Conclusions; References; 4. Umbilical Cord Blood Cells for Cardiac Repair Elad Maor, Arnon Nagler and Jonathan Leor; Introduction; Myocardial Infarction and Heart Failure; Myocardial Regeneration and Cell-Based Therapy; Problems with the Available Cell Sources; The Rationale for Using UCB Progenitor Cells for Myocardial Repair; Data from Animal Models; How Do Cord

Blood Cells Repair Ischemic Tissue?

Ex vivo Expansion Immunosuppression and Graft versus Host Disease; Summary; References; 5. Amniotic Stem Cells Paolo De Coppi, Anthony Atala and Saverio Sartore; Introduction; Amniocentesis; Differentiated Cells from Amniotic Fluid; Mesenchymal Stem Cells from Amniotic Fluid; Amniotic Fluid Stem Cells; Cell preparation and culture methods; Cell cloning; Telomerase activity; Differentiation potential induction of osteogenic phenotype; Induction of adipogenic lineage; Induction of myogenic phenotype; Induction of endothelial phenotype; Induction of hepatocytes phenotype

Induction of neurogenic phenotype Clonal and proliferative analyses; Conclusion; References; 6. Stem Cell Homing to Injury in Cellular Cardiomyoplasty Adil Al Kindi, Dominique Shum-Tim and Ray Chu-Jeng Chiu; Introduction; The Prelude: Insights from Bone Marrow Transplantation; Animal Studies; The Signaling Molecules; Summary and Conclusions; References; 7. A Molecular Imaging Perspective on Cardiac Repair with Stem Cells Kishore Bhakoo; Introduction; Radionuclide Imaging; Optical Imaging; Ultrasound; MRI Imaging; Intracellular MRI Contrast Agents; MRI Tracking of Stem Cells in the Heart
Multimodality

Sommario/riassunto

This book is an impressive compilation of contributions on the hot topic of cardiac stem cell therapy from leading groups all over the world. In the assembly of chapters, a structured approach is adopted; starting from the clinician's perspective, all developments in both the experimental and clinical research areas are covered. This journey will take the reader from the bench-top to the bedside, with all chapters written by leading authorities in their respective fields, including data still in press with medical journals.
