

Contents

Engineered MSCs from Patient-Specific iPS Cells.	1
Irina Eberle, Mohsen Moslem, Reinhard Henschler and Tobias Cantz	
Fate of Intravenously Injected Mesenchymal Stem Cells and Significance for Clinical Application	19
Beate Wagner and Reinhard Henschler	
The Implications of Stem Cell Applications for Diseases of the Respiratory System	39
Mei Ling Lim, Philipp Jungebluth and Paolo Macchiarini	
Potential of Mesenchymal Stem Cell Applications in Plastic and Reconstructive Surgery	55
Birgit Weyand and Peter M. Vogt	
General Principles for the Regeneration of Bone and Cartilage.	69
Michael Jagodzinski and C. Haasper	
Adult Mesenchymal Stem Cells Explored in the Dental Field	89
K. M. Fawzy El-Sayed, C. Dörfer, F. Fändrich, F. Gieseler, M. H. Moustafa and H. Ungefroren	
Mesenchymal Stem Cell Therapy and Lung Diseases	105
Khondoker M. Akram, Soheli Samad, Monica Spiteri and Nicholas R. Forsyth	
Mesenchymal Stem Cells as Cellular Immunotherapeutics in Allogeneic Hematopoietic Stem Cell Transplantation	131
Claudia Papewalis, Daniela Topolar, Barbara Götz, Stefan Schönberger and Dagmar Dilloo	

New Cell-Based Therapy Paradigm: Induction of Bone Marrow-Derived Multipotent Mesenchymal Stromal Cells into Pro-Inflammatory *MSC1* and Anti-inflammatory *MSC2* Phenotypes 163
Aline M. Betancourt

Interactions Between Mesenchymal Stem Cells and Dendritic Cells. . . . 199
Grazia Maria Spaggiari and Lorenzo Moretta

MSC and Tumors: Homing, Differentiation, and Secretion Influence the Therapeutic Potential 209
Naomi D’souza, Jorge Sans Burns, Giulia Grisendi, Olivia Candini, Elena Veronesi, Serena Piccinno, Edwin M. Horwitz, Paolo Paolucci, Pierfranco Conte and Massimo Dominici

Sources of Mesenchymal Stem Cells: Current and Future Clinical Use. 267
Michela Pozzobon, Martina Piccoli and Paolo De Coppi

Role of the EU Framework in Regulation of Stem Cell-Based Products 287
Giovanni Migliaccio and Cristina Pintus

Erratum to: Adult Mesenchymal Stem Cells Explored in the Dental Field 301
K. M. Fawzy El-Sayed, C. Dörfer, F. Fändrich, F. Gieseler, M. H. Moustafa and H. Ungefroren

Erratum to: Mesenchymal Stem Cells as Cellular Immunotherapeutics in Allogeneic Hematopoietic Stem Cell Transplantation 303
Claudia Papewalis, Daniela Topolar, Barbara Götz, Kevin Cieslak, Stefan Schönberger and Dagmar Dilloo

Index 305