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Myeloablative Regimens; Are Two Cords Better Than One?; Chimerism Predicting the WinnerOther Experimental Strategies; Summary; References; 3: Hematopoietic Stem Cell Development in the Placenta; Introduction; The Hematopoietic System; Historical Perspective on Placental Hematopoiesis; The Development and Structure of the Mouse Placenta; Hematopoietic Activity in the Mouse Placenta; Identification of Placental HSCs; The Origin and Localization of Placental HSCs; Hematopoietic Activity in the Human Placenta; Hematopoietic Microenvironment in the Placenta; Conclusions and Perspectives; References
4: Perinatal Mesenchymal Stem Cell Banking for Umbilical Cord Blood Transplantation and Regenerative MedicineIntroduction; Hematopoiesis; Hematopoietic Transplantations; Umbilical Cord: Source of Perinatal HSCs and MSCs; Hematopoietic Transplantations of Umbilical Cord Blood; Strategies to Overcome the Transplant-Related Limitations of Umbilical Cord Blood; Umbilical Cord Tissue MSC Banking; References; 5: Making Organ and Stem Cell Transplantation Safer: The Role of Mesenchymal Stem Cells; Introduction; MSC to Prevent Rejection After Solid Organ Transplantation
MSC in the Treatment of Graft-versus-Host DiseaseMSC to Support Hematopoietic Recovery of Stem Cells After Stem Cell Transplantation; Disclaimer; References; 6: Wharton's Jelly Mesenchymal Stem Cells and Immune Modulation: Regenerative Medicine Meets Tissue Repair; Introduction; Expression of Relevant Immunomodulatory Molecules In Vitro by MSCs; Tolerance Induction by MSCs: Rediscovering the Embryo Immune Evasion Mechanisms; Immune Modulation in Vivo: Contrasting Data on the Immune Privilege of MSCs; WJ-MSC in In Vivo Models: Enhancing the Immunomodulatory Features of Adult MSC Populations Conclusions and Future Perspectives

Sommario/riassunto

Perinatal Stem Cells, 2nd Edition builds on the first edition to provide an updated tutorial on perinatal stem cells, including stem cells harvested from the amniotic fluid, placenta, maternal blood supply, umbilical cord and Wharton's Jelly. As in the first edition, coverage includes the underlying biology of each of the sources of pregnancy related stem cells, cell culture, and potential therapeutic uses, as well as insights on the impact of these stem cells from obstetricians and gynecologists, cardiologists, hematologists, tissue engineers, and cord blood bankers. Normally discard