

## **Human Mesenchymal Stromal Cells Derived from Perinatal Tissues: Sources, Characteristics and Isolation Methods**

### **ABSTRACT**

Mesenchymal stromal/stem cells (MSCs) derived from perinatal tissues have become indispensable sources for clinical applications due to their superior properties, ease of accessibility and minimal ethical concerns. MSCs isolated from different placenta (PL) and umbilical cord (UC) compartments exhibit great potential for stem cell-based therapies. However, their biological activities could vary due to tissue origins and differences in differentiation potentials. This review provides an overview of MSCs derived from various compartments of perinatal tissues, their characteristics and current isolation methods. Factors affecting the yield and purity of MSCs are also discussed as they are important to ensure consistent and unlimited supply for regenerative medicine and tissue engineering.