

4. Single-cell RNA-seq of out-of-thaw mesenchymal stromal cells shows tissue-of-origin differences and inter-donor cell-cycle variations

This study shows that donor differences in hMSC transcriptome are minor relative to the intrinsic differences in tissue-of-origin. hMSCs with different transcriptomic profiles showed potential differences in functional characteristics. These findings contribute to our understanding of tissue origin-based differences in out-of-thaw therapeutic hMSC products and assist in the identification of cells with immune-regulatory or survival potential from a heterogeneous MSC population. Our results form the basis of future studies in correlating single-cell transcriptomic markers with immunomodulatory functions.

