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“Immune Modulatory Properties of Mesenchymal Stem Cells and Implications
for Stem Cell Therapy”

Abstract: Mesenchymal stem cells (MSC) have potent immune modulatory properties that markedly alter both local and systemic immune responses. For example, activated MSC release potent cytokines and chemokines that suppress inflammation and recruit host immune cells to sites of MSC injection. Moreover, immunological manipulation of MSC prior to administration can markedly alter their immune suppressive versus stimulatory effects. Thus, the beneficial effects of MSC on wound healing and implant incorporation may owe as much to immune modulation as to direct tissue regenerative effects. Therefore, an appreciation of the immune modulatory properties of MSC is critical when designing studies that involve local or systemic stem cell therapy.