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Remestemcel-L

National Cancer Institute

Source

National Cancer Institute. *Remestemcel-L*. NCI Thesaurus. Code C67082.

Human mesenchymal stem cells (MSCs) harvested from bone marrow of healthy adult donors and expanded ex vivo, with potential immunosuppressive application. Allogeneic adult MSCs are hypo-immunogenic due to lack of major histocompatibility II (MHC II) molecule expression, and thereby elicit none or minimal immune response upon intravenous infusion. MSCs are pluripotent, and are capable of being recruited to damaged tissue sites and differentiating along specific lineages when stimulated. Infusion of MSCs results in: a) increased production of anti-inflammatory cytokines, such as interleukin-10, prostaglandin E, and hepatocyte growth factor; b) decreased mononuclear phagocyte expression of indoleamine 2,3,-dioxygenase, which catabolizes L-tryptophan into its metabolites, which in turn contribute to inflammation; and c) modulated dendritic cell maturation and disrupted activities of natural killer cells, CD8+ and CD4+ T cells.