

Abstract

Mesenchymal stem cells (MSC) are multipotent progenitor cells with the ability to differentiate into ectodermal, mesodermal and endodermal cell line. They interact with innate and adaptive immunity and modulate their effector functions. Immunoregulatory effect of MSC results in suppression of inflammatory immune response and induces anti-inflammatory immune response. In addition, MSC have the ability to migrate into tumor site through soluble factors produced by tumor cells and contribute to tumor growth and metastasis. Preferential homing to site of cancer growth and regulation of immune system make the MSC a promising tool for cancer therapy.

Key words: mesenchymal stem cells, immunoregulation, tumors, cancer gene therapy