Amnion-derived Cellular Cytokine Solution

National Cancer Institute

Source


A topical cellular cytokine solution containing a distinct combination of growth factors and cytokines secreted by and released from amnion-derived multipotent progenitor (AMP) cells, with potential immunomodulating and skin healing activities. The amnion-derived cellular cytokine solution (ACCS) contains near physiological levels of transforming growth factor beta, tissue inhibitor of metalloproteinase-1 (TIMP-1) and TIMP-2, as well as the angiogenesis factors platelet-derived growth factor (PDGF), vascular endothelial growth factor (VEGF) and angiogenin that are normally found in healing wounds. Upon spraying the solution onto affected areas, the cytokines and growth factors in ACCS appear to increase the migration, proliferation and differentiation of both keratinocytes and fibroblasts; enhance the migration and phagocytosis of macrophages in wounds; and increase epithelialization. Together these processes may accelerate skin healing and tissue repair. Also, ACCS may be beneficial in the treatment of radiation burns of the skin.