Novel Method to Inhibit Tumor Growth & Other Neovascular Diseases

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Technology description

Description

Bone marrow-derived stem cells are known to contribute to the repopulation of tissues undergoing repair. A mechanism by which the emigration of endothelial precursor cells from the circulation to sites of angiogenesis has recently been elucidated by researchers at UCSD. Increased understanding of this mechanism has identified a target for the modulation of stem cell trafficking.
Peptide, antibody or small molecule antagonists of the target may inhibit bone marrow-derived stem cells from entering tissues and from participating in tumor growth, atherosclerosis, restenosis and other neovascular diseases such as arthritis and psoriasis. Conversely, homing of stem cells to endothelium can be stimulated allowing enhancement of angiogenesis in ischemic disease, muscle repair and nerve repair. Additionally, the target provides a method to isolate stem cells from tissues such as bone marrow or peripheral blood so that they can be expanded and used for therapeutic applications such as the treatment of damaged heart tissue or repair of congenital muscle defects.

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