Novel receptor for Amino-Nogo

OCR Number: OCR 3038

Description:
Nogo-B is a newly-discovered protein that is highly expressed in endothelial and smooth muscle cells of the vessel wall. Nogo-B has been shown to be a regulator of cell migration in vitro and of vascular remodeling in vivo. Molecules that mimic the activity of Nogo-B have been shown to be pro-angiogenic. More recently, the receptor for Nogo-B has been identified. Antagonists of the receptor have been shown to be anti-angiogenic, and therefore useful for the treatment of solid tumors. Work at Yale is underway to identify additional anti-angiogenic molecules.

Field of Application: Nogo-B agonists could be applied in treatment of cardiovascular disease and diabetic foot ulcers; anti-angiogenic antagonists could used to treat solid tumors, acute inflammation, and age-related macular degeneration.

Advantages: Nogo-B is a novel angiogenesis target. Molecules that inhibit the Nogo-B receptor could offer an alternative to or complement existing VEGF modulation approaches. Sales of anti-angiogenesis therapies are expected to reach $10B by 2009.

Stage of Development: Yale researchers are beginning to screen compounds that interact with the Nogo-B receptor.

Publications:
PNAS. 2006 Jul 18;103(29):10997-1002.

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