

## Differential uPA expression by TGF- $\beta$ 1 in gingival fibroblasts

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Transforming Growth Factor- $\beta$ 1 (TGF- $\beta$ 1) plays a key role in connective tissue remodeling and inflammation. Under pathological conditions, like periodontal disease, fibroblasts may display an altered response to this growth factor. To investigate this question, we have studied whether TGF- $\beta$ 1 may differentially regulate the expression of urokinase at the protein level in primary cultures of fibroblasts derived from healthy gingiva, granulation tissue from gingival wounds, and chronic periodontal disease. We observed that TGF- $\beta$ 1 may repress urokinase expression in healthy gingival fibroblasts and promote its production in granulation-tissue fibroblasts. A significant correlation was found between expression of the myofibroblast marker  $\alpha$ -smooth-muscle actin and stimulation of urokinase production by TGF- $\beta$ 1. Immunostaining of gingival wounds showed that myofibroblasts were involved in urokinase production. TGF- $\beta$ 1-stimulated urokinase expression was blocked after inhibition of the c-jun-NH 2