



PSORIASIS

## ENHANCED CYR61 LEVELS IN PATIENTS WITH PSORIASIS VULGARIS (PV)

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**Objective:** Cysteine-rich protein 61 (Cyr61), also known as CCN1, a multifunctional non-structural protein found in the extracellular matrix (ECM), is a pro-inflammatory cytokine, which can amplify inflammatory microenvironment by inducing TNF- $\alpha$ , IL-6 and IL-8 in many types of autoimmune diseases. This study is to investigate the association of Cyr61 in the pathogenesis of psoriasis vulgaris (PV).

**Methods:** The serum levels of Cyr61 in patients with PV and controls were measured by ELISA. The mRNA expression of Cyr61 in PBMCs and skins from PV patients and controls were observed by Real-time PCR and Immunohistochemistry. The CYR61 expression in HaCaT cells treated with EGF or PBS. The effects of Cyr61 on the expression of cytokines, such as IL-6, IL-17, IL-8, IL-4, IL10, IFN- $\gamma$  and TNF- $\alpha$ , were evaluated in PBMCs and CD4+ T cells from PBMCs of PV patients.

**Results:** Our data indicated that serum Cyr61 levels were significantly elevated in patients with PV when compared with those in atopic dermatitis (AD) patients and control group. Moreover, the expression of Cyr61 in PBMCs and skin from PV patients were also higher than those in control group. Furthermore, Cyr61 up-regulated the mRNA expression levels of IL-6, IL-17 and IFN- $\gamma$  in PBMCs from PV patients. In addition, Cyr61 enhanced the IFN- $\gamma$  and IL-17 expression on the CD4+ T cells from PBMCs of PV patients.

**Conclusions:** This study provides first observations on the association of Cyr61 and PV, and showed the elevated Cyr61 levels. We suggest that Cyr61 may play a role in the pathogenesis of PV.

