

## Angiotensin II stimulates expression of transcription factors c-Jun and c-Fos in cyclosporine induced human gingival fibroblasts

### Abstract

The present study demonstrates that the expression of c-Jun and c-Fos are elevated in gingival fibroblast cells treated with angiotensin II and cyclosporine. The healthy human gingival tissues were collected and gingival fibroblasts were isolated and cultured. We used RT-PCR and Western blot analysis to identify the expression of c-Jun and c-Fos in cyclosporine and angiotensin II treated human gingival fibroblast cells. We found that angiotensin II in combination with cyclosporine induces c-Jun and c-Fos expressions significantly; however, the angiotensin II antagonist losartan inhibits the expression of c-Jun and c-Fos ( $p < 0.01$ ). The data suggest that angiotensin II in combination with cyclosporine modulates the expression of c-Jun and c-Fos in human gingival fibroblast cells.

**Keyword:** Angiotensin; c-Jun; c-Fos; Transcription factor; Cyclosporine; Gingival overgrowth