

The Effect of the Application of Mangosteen Peel Extract (Garcinia mangostana Linn.) towards PDGF-B Expression on Human Gingival Fibroblast Cell Culture

ABSTRACT

Background: : Normal wound healing is a complex, dynamic process and can heal naturally. Wound healing process can accelerated by application of herbal treatment. One of the herbal treatment is mangosteen peel (Garcinia mangostana Linn.). Growth factor is a chemotactic of macrophages in wound healing process. Elevation of macrophages would increased the proliferation of fibroblasts then process of remodelling in wound healing would accelerated. Mangosteen peel's extract compounds of tannin, saponin, flavonoid, and xanthone functions as an antioxidant, anti-inflammatory and antimicrobial. **Purpose:** The aim of this study was to investigate the effect of the application of mangosteen peel extract towards PDGF-B expression on human gingival fibroblast cell culture. **Methods:** Human gingival fibroblast cell culture divide on 6 well plates for each category: control 24 and 48 hours, the treatment of 24 and 48 hours. The experiment use concentration 800µg/ml. Then the extraction were processed by PCR assay. **Results:** Group of the control 24 and 48 hours showed a brighter band than the treatment group 24 and 48 hours. **Conclusion:** The application of the mangosteen peel extract decreased the expression of PDGF-B on human gingival fibroblast cell culture.

Keywords: Mangosteen peel extract, growth factor, PDGF-B, PCR, human gingival fibroblast.