ABSTRACT

Propolis is a resinous substance collected and used by honeybees; *Apis mellifera* in to protect their larvae from virus and bacterial infections. Due to various chemical composition of the propolis, it was hypothesized that Thai propolis may have the action on the movement of the fibroblasts. This research has been divided into two parts; (a) in *in-vitro* tests of propolis and (b) in vivo tests of propolis. In this six months study, fibroblasts were cultured and made incision in the plate. Then, the movement of fibroblast cells to the incision activated by the propolis was compared with experimental group and a control groups. The results showed that Thai propolis has cytotoxic and activate cell migration properties *in in vitro* tests. The in vivo results showed that the wounds were healed within 10 days. This indicates that Thai propolis has wound healing properties. HPLC analysis results showed that Thai propolis has one biologically active compound of phenols so called "5-caffeoylquinic acid" (5-CQA) which has antioxydative properties. The most possible explanation is that the Thai propolis has chlorogenic acid (CGA), biologically active compound of phenols so called "5-caffeoylquinic acid" (5-CQA) which has antioxydative properties. In conclusion Thai propolis has main biological active compound is "5-caffeoylquinic acid" (5-CQA). The Thai propolis has shown cytotoxicity, cell proliferation and cell migration in i*n vitro* tests. In vivo experiment showed that Thai propolis has wound healing properties.