Effect of ficus deltoidea extracts on hepatic basal and insulin-stimulated glucose uptake

ABSTRACT

The present study was designed to evaluate the potential of five extract and three fractions of Ficus deltoidea to enhance basal and insulin-stimulated glucose uptake into Chang liver cell line. The results showed that all Ficus deltoidea extracts and fractions except petroleum ether extract have the ability to enhance either basal or insulin-stimulated glucose uptake into liver cell line. Ethanolic and methanolic extracts as well as acidified chloroform and bacified chloroform fractions possess insulin-mimetic activity. Of all extracts and fractions, ethanolic extract possess the highest insulin-mimetic activity. Methanolic extract and n-butanol fraction possess insulin-sensitizing activity, with the highest activity shown by methanolic extract. There is no synergistic effect between Ficus deltoidea extracts or fractions with 100 nM insulin. It can be suggested that antidiabetic action of Ficus deltoidea is partly associated with glucose disposal into liver cells.

Keyword: Ficus deltoidea; Antidiabetic, Chang liver cell lines, Glucose uptake activity