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NOVEL BITTER MELON (*MOMORDICA CHARANTIA L.*) AND OLIVE LEAVES (*OLEA EUROPAEA L.*) PHYTOSOMES: PREPARATION AND ITS EVALUATION FOR ANTI-HYPERGLYCEMIC ACTIVITIES BY ORAL GLUCOSE TOLERANCE TEST (OGTT)

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ABSTRACT

Objectives

The objectives of this study was to prepare and investigate the phytosomes of crude bitter melon and olive leaves extracts for anti-hyperglycemic activities in glucose-induced hyperglycemic rats.

Methods

Phytosomes were prepared by reacting one mole of the phenolic compounds of each extract with two moles of Phosphatydil-choline. Bitter melon and olive leaves phytosomes (150 and 200 mg/kg) were evaluated for oral toxicity.

Results

In the oral toxicity study, no mortality was observed among the rats received the phytosomes at the single dose of 150, 200mg/kg. Hence one tenth of the phytosomes dose tested (20mg/kg). Moreover, it is evaluated for hypoglycemic effects by oral glucose tolerance test in induced hyperglycemic rats. In the orally glucose induced hyperglycemic rats, phytosomes were significantly reduced serum glucose levels at 60, 90 and120 minute ($P<0.001$) than it is extracts. Most significant reduction was observed at 90 minute (26%). Glibenclamide was used as standard drug.

Conclusions

Our results indicated that the bitter melon and olive leaves phytosomes is more potent in anti-hyperglycemic activities than extracts. Clearly, further studies are warranted to improve our understanding of the underlying mechanisms.

KEYWORDS: *Bitter Melon Extract, Olive Leaves Extract, OGTT, Phytosome, Phosphatydil-Choline*

Article History

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