SHORT COMMUNICATION

IN VITRO ANTIOBESITY ACTIVITY OF SOME PLANTS THROUGH A MODIFIED LIPASE INHIBITION ASSAY

ABSTRACT

The objective of the present study was to evaluate the antiobesity potential of various plant (leaves or seed) extracts through a modified *in vitro* lipase inhibitory activity assay. Dimethyl sulphoxide (DMSO, negative control or solvent) extracts as cold infusion of leaves and seeds of some plants were studied for lipase inhibitory potential using porcine pancreatic lipase enzyme, p- nitro phenyl acetate and orlistat (as positive control or standard inhibitor). Among the leaves, the *Urtica dioica* showed the best pancreatic lipase inhibition activity (52.0 %). On the other hand, among the seeds, *Trachyspermum ammi* showed the highest per cent lipase inhibition (91.68 %). Among six leaves' and seven seeds' extract, it was evident that the seeds showed better pancreatic lipase inhibition activity over the leaves in the study. The lipase inhibition was found to be in the range of 34.43 to 91.68 % for the plants in study. DMSO extract of the plants under the study showed significant pancreatic lipase inhibitory activity indicating strong antiobesity activity. Therefore, the plants can be further investigated for the identification and isolation of chief bioactive constituents for developing the lead molecules for obesity treatment.