

# **Synthesis, Characterization and Evaluation of Topical Antiinflammatory Activity of Dimethyl 4- Oxo-2,6-diphenylcyclohexane-1,1-dicarboxylate**

## **Abstract**

An attempt was made to synthesize a topical preparation of an active compound that has a potent antiinflammatory activity. Dimethyl 4-oxo-2,6-diphenylcyclohexane-1,1-dicarboxylate (II) was prepared by aldol condensation of benzaldehyde and acetone followed by Michael addition of dimethyl malonate. The optimum concentration of the compound was determined by comparing the antiinflammatory effect of ointment preparations at different concentrations. The antiinflammatory effects were studied by using carrageenan-induced paw edema method in rat and xylene induced rat ear edema. Good effect was observed with ointment containing 4 % and 5 % of the compound II concentration. The results showed that the drug had an obvious antiinflammatory effect as an external preparation and the activity is comparable to that of the standard ointment.