

THE ANTIINFLAMMATORY ACTION AND TOXICOLOGICAL STUDIES

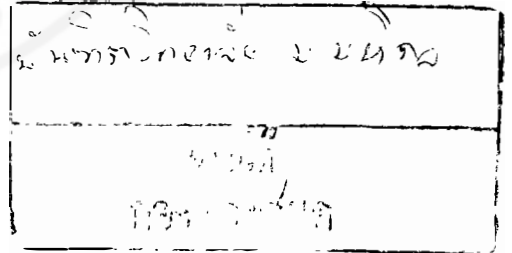
OF EXTRACTS FROM CLINACANTHUS NUTANS

BY

SUCHADA KITTISIRIPORNKUL



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The antiinflammatory action and toxicological studies of extracts
from Clinacanthus nutans

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SUCHADA KITTISIRIPORNKUL

Department of Pharmacology, Faculty of Science, Mahidol University,
Rama 6 Road, Bangkok

ABSTRACT

Methanol, chloroform, n-butanol and water extracts of fresh leaves of Clinacanthus nutans were investigated for anti-inflammatory activity. In the acetic acid-induced writhing and increased in vascular permeability model, n-butanol extract possesses a relatively more potent than the others. Butanol extract 90 mg/kg was as potent as phnylbutazone 100 mg/kg, and 540 mg/kg of this extract is as potent as 4 mg/kg of indomethacin. The variation in time of collecting this plant did not have the significant influence on the efficacy of n-butanol extract. However, the potency of this extract decreased slightly when it was kept in the refrigerator for 6 months before it was tested in carrageenin induced hind paw edema (acute phase of inflammation). In the later model, n-butanol extract 270 mg/kg was as potent as acetylsalicylic acid 100 mg/kg. The analgesic property of n-butanol extract is not likely to be of morphine type because it did not potentiate hexobarbital sleeping time and was inactive in mice hot-water bath test. There were no

significant reductions in exudate being detected in all concentrations used in topically applied granuloma pouch method (proliferative phase of inflammation) when this extract was prepared in cream preparation and applied topically. This negative result may be due to inappropriate dosing and/or cream base. This extract 2,430 mg/kg produced less ulceration than aspirin 100 mg/kg when they were given orally. Oral administration of butanol extract 270 and 540 mg/kg daily for 6 weeks did not result in any observable adverse effects, except the gastric ulceration which is of much less severity than that caused by aspirin 100 mg/kg. The growth rate of animals and adrenal glands weight were not significantly different from control. Both doses (270 and 540 mg/kg) of n-butanol extract decreased the thymus weights but the significant decrease was observed only when 540 mg/kg was used. Liver weights were increased at both doses. Further studies on the effects of this extract on the thymus and liver weight are obviously interesting. The n-butanol extract contains approximately 4-5 compounds. The structure elucidation of active constituents is in progress.