substituent at N-3 position of thiazolidinone ring were important requirements for antiHIV activity.

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Antiinflammatory activities of Calamus rotang Mill

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Calamus rotang is a shrub, which is not much explored scientifically. Studies on the ethanolic (95%) extract of rhizome exhibited antiinflammatory activity in carrageenan-induced paw oedema and cotton pellet granuloma pouch models and the results were comparable with that of standard drug Phenylbutazone.

Calamus rotang Linn (Family: Palmae) is a shrub, distributed endemically in India¹. Rhizomes are astringent, acid and bitter in taste. They are used as expectorant, antiinflammatory, diuretic, febrifuge and as tonic². This plant has been traditionally used for reducing inflammation; hence, 95% ethanol extract of C. rotang (CRE) was evaluated for antiinflammatory activity in different phases of inflammation in animal models.

Rhizomes were collected from Coutrallam, Tamilnadu and authenticity was confirmed with local Floras. They were shade dried, cut into small pieces and powdered in a pulverizer. Coarse powder was extracted with ethanol using Soxhlet apparatus. CRE was suspended in 0.75% carboxy methyl cellulose and used throughout the experiment. They were analysed for antiinflammatory activity by carrageenan-induced paw oedema and cotton pellet granuloma models.

Male Wistar rats weighing between 150 and 200 g procured from King Institute, Guindy, Chennai were selected for the studies. The study was carried in accordance with the rules and regulations laid down by the Institutional Animal Ethical Committee.

For carrageenan-induced paw oedema model, rats were grouped into 7 groups, containing 6 animals per group. Group 1 served as negative control (1 ml of saline). The second group served as positive control (phenylbutazone 5 mg/kg), while the other groups received CRE in different doses of 50, 100, 150, 200 and 250 mg/kg orally. Oedema was induced as per standard methods³. The paw volume was measured 0 h and 3 h, after the injection of carrageenan (0.1 ml 1% w/v). Drug pretreatment was given 1 h before the injection of carrageenan. Percent inhibition of oedema was calculated⁴.

In cotton pellet granuloma model, rats were divided into 7 groups, containing 6 animals per group. Group 1 served

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as negative control (1 ml of Saline). The second group served as positive control and received phenylbutazone 5 mg/kg. While the other groups received CRE (50, 100, 150, 200 and 250 mg/kg orally). After shaving off the fur on the dorsal side, rats were anaesthetized with pentobarbitone (30 mg/kg), through a single middle incision on the dorsal surface, sterilised pre-weighed cotton pellets (50±1 mg) were implanted in both axillae and groins according to standard methods. Extracts were administered orally, daily for 10 days (0 to 9 days). On the 10th day, the animals were sacrificed and cotton pellets were dissected out, dried at 60° and weighed.

The results were analysed statistically using Students t-test. Table 1 illustrates the effect of CRE in carrageenan-induced oedema. Oedema suppressant effect of 150, 200 and 250 mg/kg doses were 46.0, 54.0 and 49.4%, respectively. Table 2 demonstrates the effect at the dose level on 200 and 250 mg/kg, which inhibited granuloma formation, showing a dose dependent inhibitory effect on the granuloma weight.

Carrageenan-induced paw oedema was taken as prototype of exudative phase of inflammation, where development of oedema being described as biphasic. The initial phase is attributable to release of histamine, serotonin and kinins in the first hour after injection of carrageenan. A more pronounced second phase is related to the release of prostaglandins like substances in 2 to 3 h.

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