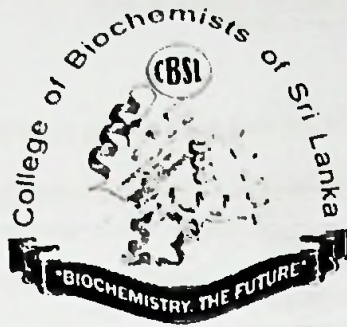




College of Biochemists of Sri Lanka

1st Bi-annual Conference

Biochemistry for Sustainability

26th October 2018

Hotel Galadari, Colombo

Inhibitory Effect of the Leaf Extract of *Acronychia pedunculata* on Prostaglandin E₂ Level of Wistar Rats with Chronic Arthritis

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Background: Prostaglandin E₂ (PGE₂) is a mediator associated with physiological and pathological conditions. Although it has various physiological roles at normal level, alterations in PGE₂ are associated with pathological conditions such as inflammatory diseases. *Acronychia pedunculata* ("Ankenda" in Sinhala) leaves have been used for centuries in traditional medicine for the treatment of inflammatory diseases.

Objective: All our previous findings contributed to solicit the anti-inflammatory activity of this plant. As PGE₂ is an inflammatory marker, an attempt was made to evaluate inhibition of PGE₂ level by leaf extract of *A. pedunculata* on adjuvant-induced arthritis rat model, in the present study.

Methods: Healthy adult male, Wistar rats (150-200 g) were used for the experiment (n=6/group). The negative and positive control groups were orally administered with 1.0 mL of 0.5 % carboxymethyl cellulose and celecoxib (20 mg/kg b. w.) respectively. The test group received a dose of 200 mg/kg b. w. of 70 % ethanol extract of *A. pedunculata* leaves (EEAL) which was found to be the most effective dose during the studies on acute anti-inflammatory activity. The oral treatments were started on day 14 of the experiment, continued to day 28.

Results and Discussion: Treatment with 200 mg/kg b. w. of EEAL significantly ($p < 0.05$) inhibited the PGE₂ level as compared to the negative control. It was 266 ± 44 pg/L, in EEAL treated group whereas it was 824 ± 83 pg/L for negative control. PGE₂ level for celecoxib treated group was 306 ± 36 pg/L.

Conclusion: The present study demonstrates that the EEAL has PGE₂ inhibitory activity which may be contributing to its anti-inflammatory effect. The findings justify the traditional use of this plant in the treatment of various types of inflammation.