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OPEN ACCESS

Evaluation of Anti-Inflammatory and Analgesic Activity of *Ananas comosus*(L.) Merr. Peel Extracts in Wistar Albino Rats

Taslima Jahan[1] *and Zubaidur Rahman*[2]

[1]*Department of Pharmacy, Arunachal University of Studies, Namsai-792103, Arunachal Pradesh*

[2]*North East Frontier Technical University, Medog, Aalo-791001, Arunachal Pradesh*

ABSTRACT

Background and Aims: *Ananas comosus* (L.) Merr. (Pineapple) is a tropical plant belongs to the family *Bromeliaceae*. It is traditionally used to treat various health conditions like inflammation, diabetic condition, cancer, liver diseases etc. The preliminary phytochemical studies of *A.comosus* peel extract depicted the presence of flavonoids, phenols, tannins, carbohydrates, glycosides, proteins etc. The main aim of this study was to evaluate the anti-inflammatory and analgesic activity of methanolic extract of *A. comosus* peel in rats.

Methods: The anti-inflammatory effect was evaluated by the rat paw edema induced by sub plantar injection of 100 µL of 1% carrageenan solution in the right hind paw of the rats. Analgesic activity was examined by the acetic-acid-induced writhing response and hot plate test. Both anti-inflammatory and analgesic activity of methanolic extract of peels of *A. comosus* was studied in Wistar Albino rats at doses of 100, 200 and 300 mg Kg^{-1} body weight.

Results: The data showed that the crude extract of peels of *A. comosus* could reduce the edema in a dose-dependent manner ($P<0.05$). The result of 300 mg Kg^{-1} of the extract were more significant and comparable with the effect of Diclofenac sodium. Also application of different doses of crude extract of peels of *A. comosus* had significant anti-nociceptive effects in both animal models.

Conclusion: Based on the results from the present study it is concluded that the methanolic extract of *A. comosus* peel possesses significant anti-inflammatory activity in animal models. More studies are required to clarify the active components responsible for the anti-inflammatory and analgesic activity.

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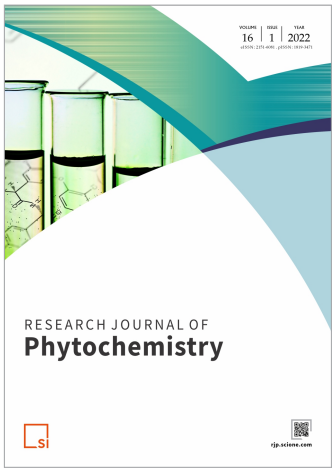

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