

Evaluation of Anti-arthritic and Analgesic Activity of *Celastrus paniculatus* in Different Animal Models
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Abstract

The goal of the management of arthritis is to alleviate pain, joint swelling and inflammations. Most commonly prescribed nonsteroidal anti-inflammatory agents (NSAIDs) have associated side effects on human health. The search for a novel agent is therefore essential. The study evaluated the anti-arthritic and analgesic activity of *Celastrus paniculatus* ethanol extract in animal models. Arthritis was induced using formalin (0.1 mL 2% v/v), while hyperalgesia by acetic acid and eddy's hot plate in Wistar rats. The extracts, at 250 mg/kg and 500 mg/kg was administered to the animals for ten days. Changes in paw thickness, paw oedema volume and C-reactive protein levels were recorded. Histopathological analysis of knee joint was performed. The study results revealed that the extracts of *Celastrus paniculatus* significantly ($p < 0.05$) inhibited the increase in parameters of arthritis, inflammation and pain in a dose-dependent manner (the maximum effect was observed in 500 mg/kg body weight) and restored the normal architecture of the knee joint tissues. The study confirms the anti-arthritic and analgesic activity of *Celastrus paniculatus*

Keywords: *Celastrus paniculatus*, formalin, anti-arthritic, C-reactive protein