

# Anti-Inflammatory and Anti-Hyperalgesic Effect of *Blumea balsamifera* Methanolic Extract in Carrageenan Induced Rats

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## ABSTRACT

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Inflammation is a pathophysiological response of immune system and a fundamental defense mechanism of organism to injury. It protects our body from harmful and activates the healing process. Hyperalgesia is an exaggerated sensitivity to painful stimuli which induced by inflammation or tissue injury. According to World Health Organization (WHO), herbal medicines served as the primary health care for majority of the world's populations. *Blumea balsamifera* (BB) is an alternative medicinal plant grows throughout Asia. Traditional Thai and Chinese medicine used BB leaves in treatment of miscellaneous diseases such as sinusitis, influenza, asthmatic bronchitis, rheumatism, hypertension, boils and coughs. The effect of BBME will be evaluated by paw edema test and Hargreaves' plantar test. A total of 25 rats are divided into 5 in each group. 5ml/kg of vehicle (1% Tween-80) are given orally to Group 1. 10mg/kg of Diclofenac sodium, 100mg/kg, 200mg/kg and 300mg/kg of BBME are given orally to Group 2, 3, 4 and 5. Their right paws are induced by carrageenan and the volume is measured by plethysmometer every hour until 6<sup>th</sup> hour. After that, thermal radiant heat is applied on right plantar and the withdrawal latencies are recorded. The result showed that the BBME at 200mg/kg produced an edema inhibition of 25.58% and significant ( $P<0.05$ ) anti-hyperalgesic effect in all group especially at dose of 200mg/kg and 300mg/kg.