



### ABSTRACT

The purpose of this study is to determine the secondary metabolites of the methanolic root extract of *Syzygium cumini* (Black plum) whether it is an effective anti-inflammatory factor to the *Rattus albus* injected with carrageenan. The Indomethacin drug was administered to the *Rattus albus* via oral gavage with carrageenan-induced paw edema within the positive control (T<sub>1</sub>) group at a dose of 0.2 mg/kg body weight for seven consecutive days. In the same manner, the *Syzygium cumini* root methanolic extract (T<sub>2</sub>) group received a dose of 100mg/kg body weight. Inflammation was measured by monitoring the paw volume using improvised water displacement method. Both treatment groups were considered to be an effective anti-inflammatory agent however, the effect is not the same since positive control group has the most effective anti-inflammatory effect. Phytochemical screening was conducted and results showed the presence of flavonoid, alkaloids, tannins, triterpenoids, glycosides, saponins. Presence of the compounds contributed to the possible conclusion of the potential anti-inflammatory effect of the black plum root.

*Key words: anti-inflammation, carrageenan, indomethacin, phytochemical screening, water displacement method*