

ANTI-INFLAMMATORY ACTIVITY OF AQUEOUS EXTRACTS OF FLOWERS AND STALKS OF APONOGETON CRISPUS AND APONOGETON RIGIDIFOLIUS

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Aponogeton crispus and *Aponogeton rigidifolius* are native *Aponogeton* plants in Sri Lanka. These are widely used in folkloric medicine. Recent pharmacological studies have established anti-diabetic, anti-inflammatory, anti-oxidant, anti-cancer and thrombolytic activities of *Aponogeton* species. Aim of this study was to evaluate the effect of *A. crispus* and *A. rigidifolius* on acute inflammatory response. *A. crispus* and *A. rigidifolius* flowers and their stalks were collected and the extract was prepared by standard ayurvedic method. Carrageenan (1%, 0.1 ml) induced paw oedema in Wistar rats model was used to evaluate the acute anti-inflammatory activity. One hour before the carrageenan injection, positive control 15 mg/kg dichlofenac sodium, negative control – distilled water and test samples (*A. crispus*- 90 mg/kg; *A. rigidifolius*- 90 mg/kg) were administered orally. Digital plethysmometer was used to measure the anti-

inflammatory effects at every hour interval for 5 hours to see the paw oedema percentage inhibition and the effect was also compared with extract, control and standard. Carrageenan injection into the left hind paw induced oedema progressively and maximum oedema reached at 3rd hour. Dichlofenac sodium, *A. rigidifolius* showed the maximum inhibition of 61.3% and 62% respectively at the 3rd hour. *Aponogeton crispus* showed the maximum inhibition of 65.9% at the 4th hour and 60% at the 3rd hour. Aqueous extract of two plant species of *Aponogeton* showed a significant percentage inhibition of oedema in the hind paw and anti-inflammatory activities compared to control demonstrate that it will be useful for the management of acute anti-inflammatory disorders.

Keywords: Anti- Inflammatory, *Aponogeton Crispus*, *Aponogeton Rigidifolius*