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An investigation on anti-malarial and anti-inflammatory effects of *Aranya Thulasi mulang Kasaya* in rodent malaria models.


'*Aranya Thulasi mulang Kasaya*', [a hot water extract (Evolvulus alsinoides (Family: Convolvulaceae; Sinhala: Vishnuhranthi), *Alstonia scholaris* (Family: Apocynaceae; Sinhala: Rukathhana), *Ocimum sanctum* (Family: Labiate; Sinhala: Heen Maduruthala) and *Zingiber officinale* (Family: Zingiberaceae; Sinhala: Inguru)] is claimed to be used in indigenous medicine for treatment of malaria. The objective of this study was to scientifically investigate the anti-malarial, anti-inflammatory effects and toxicity of a lyophilised form of this decoction. Anti-malarial effects were evaluated using the *P. berghei* mouse model. Four groups of ICR mice (n=9 for Test 1, Test 3 and Test 3 and n=6 for control) were inoculated with 1x10^7 ring stage parasites, intraperitoneally. Test groups 1 and 2 were orally administered with the decoction at a dosage of 400mg/Kg and Test group 3 with a dosage of 800 mg/kg, twice a day for 7 consecutive days. For test group 1, treatment was started when the parasites were patent in their peripheral blood and for test group 2 and 3, treatment was started from day 0. The control group was similarly administered with water. Animals in the three test groups and control group reached mean parasitemias of 45.1%, 35.9%, 46.2% and 46.7%, respectively, by day 6. Thus, the development of parasitemia in the test and the control groups was comparable, reflecting no anti-parasitic effect of this decoction. Toxicity studies of the decoction were carried out in rats at a dosage of 400mg/Kg, administered orally twice a day, for 30 consecutive days. The decoction was well tolerated showing no toxic effects. Anti-inflammatory effects were tested using the carrageenan-induced rat paw oedema technique and there was no significant effect at a dosage of 400g/Kg, but at 800 mg/kg there was a significant pro-inflammatory effect. This study shows that this decoction, which is not toxic, has no anti-parasitic effect on *P. berghei* infections in mice and no anti-inflammatory effects in rats.