

ABSTRACT

ANTIPLASMODIAL EFFECT OF AQUAEUS EXTRACT OF PARE (*Momordica charantia L*) SEEDS IN *Plasmodium berghei* STRAIN ANKA – INFECTED MICE (*Mus musculus* STRAIN BALB/C)

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The aim of this research was to investigate the antimalarial activity of the aqueous extract of *Momordica charantia L* seed and its influence to perform the hematin in *Plasmodium berghei*-infected mice in vivo. Groups of six mice were used to assay the different concentration of seeds extracts, two control groups were also included; positive and negative controls, with 3 replication.

Oral treatment was started on day 3 post infection (as H₁ treatment) with aqueous extracts dissolved in CMCNa 0,5%, at a dose of 1000; 100; 10; 1; 0,1 and 0.01 mg/kg of body weight and was then continued daily for 4 days (H₂, H₃, H₄). 24 hours after the last treatment, the blood was intake by intra cardiac puncture for the inspection of rate of hematin.

The parasitemia of each treatment was determined by microscopic examination of thin blood smears stained with 10% Giemsa's stain, the total number of RBCs infected are counted in 1000 RBCs with 1000 microscope magnification. Rate of hematin got through by comparison between hematin alkaline with oxyhemoglobin spectrophotometrically in 0.5 lights path cuvette at the following wavelength: 540, 576, 593 nm.

The results between groups showed a significant reduction in parasitemias (*Test of Anova*, $p < 0,05$; *Test LSD*; $p < 0,05$; $SE = 3,59$). The highest parasite reduction at group of treatment showed at dose 10 mg/kg body weight ($N=3$; $Mean = 46,5$; $SD = 1,71$; $SE = 0,99$). All treated groups showed a significant reduction in parasitemias compared to the control group (*Test of Anova*, $p < 0,05$; *Test LSD*; $p < 0,05$; $SE = 3,35$). The rate of hematin between group of treatment not significantly different (*Test of Anova*, $p > 0,05$; *Uji LSD*; $p > 0,05$; $SE = 12,44$). All treated groups not showed a significant rate of hematin compared to the control group (*Test of Anova*, $p > 0,05$; *Uji LSD*; $p > 0,05$; $SE = 11,7$).

Keywords : Pare, *Momordica charantia Linn.*, seed, antimalaria, *Plasmodium berghei*, oxyhemoglobin, alkaline hematine, hematine.