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Antimalarial efficacy of stem bark extract from *Hintonia latiflora* in a *Plasmodium yoelii yoelii* malaria model

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Hintonia latiflora (Hl) stem bark issued in some rural communities of Mexico to treat malaria, diabetes and gastro intestinal diseases. The efficacy of Hl stem bark methanolic extract (Hl MeOHe) in CD1 male mice infected with *Plasmodium yoelii yoelii* (Pyy) was tested. Plant material was obtained in a solid liquid system for 72h. The solvent was evaporating *in vacuo* to afford 10g of extract. A 4 day tests chime was used. Oral dose of 1,200,600, and 300mg/kg were evaluated; oral chloroquine was used as positive control. Transmission electron microscopy (TEM) was used to identify ultra-structural changes on the asexual intraerythrocytic stages of Pyy treated with Hl Me OHe. None treated Pyy infected mice died between 6 and 7 days post-infection (PI) with Parasitemia over 70%. Pyy-infected mice treated with 600 and 300mg/kg showed a chemo suppression percentage of total Parasitemia of 99.23 and 23.66, respectively, animals in both groups died 6 to 7 days PI with Parasitemia over 45%. With 1,200mg/kg of Hl MeOHe, Pyy-infected mice, showed a 100% chemo suppression of total Parasitemia on 5 days. Pianda 23 days survival time with a mean Parasitemia of 23.6% at the day of death (table1). Body temperature of treated mice was significantly decreased ($P < 0.05$) in a dose-dependent manner one minute after dosing; the maximum effect was obtained with the highest dose 2 hater extract administration. Maximum extract dose decreases mice temperature up to 3°C (table2). TEM images showed morphological changes of parasite death (figure2). The results obtained in this study showed that the infection outcome of Pyy- infected mice is affected by Hl MeOHe. Although the stem barks showed efficacy to treat murine malaria, its chemical composition and toxicity should be studied in detail for the benefit of those who consume it. Study partially supported by project DGAPA-PAPIITUNAMIA203015.

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