Joint Event

10th International Congress on
Infectious Diseases

12th International Conference on
Tropical Medicine and
Infectious Diseases

February 22-23, 2023

Webinar

J Infect Dis Ther 2023, Volume 11

Activity of methanolic extract of Carica papaya (Caricaceae) yellow leaf against Plasmodium berghei in mice

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Statement of the Problem: Malaria still remains a public health problem in developing countries. Malaria is one of the most prevalent diseases in Nigeria and people who are infected still relay on traditional medicine as a source of treatment for the disease. Malaria causes mortality and morbidity with social economic impact in developing countries where the burden is high. Research shows that the high global health challenges is partly due to multidrug resistance by Plasmodium falciparum developed on existing and available and antimalarial drugs and that has lead to the urgent to the urgent need in search of treatment to eradicate malaria in developing countries.

Purpose of the Study: Is to evaluate the antimalarial potential of methanolic extract of Carica papaya yellow leaf on animal model.

Methodology and Theoretical Orientation: *In vivo* screening for antimalarial drug discovery is one of the recommended stream line processes for evaluating new compounds in path from drug discovery to development. The Rane's curative method is established infection was employed in vivo for assessing antimalarial activity. Swiss albino mice of both sexes weighing between 23-27 g and aged 6 weeks were infected with 1*10^-7 P. Berghei(NK-65)RBC/ml intraperitoneally and were treated with various doses (100,200 and 400 mg/kg b.wt) of C. papaya yellow leaf extract. Acute oral toxicity test was employed using OECD method.

Findings: The mice treated with 400 mg/kg b.wt of C. papaya yellow leaf extract showed significant ($p<0.05$) antimalarial activity. In acute oral toxicity studies showed that the maximum tolerated dose was found to be 5000 mg/kg body weight.

Conclusions: C. papaya yellow leaf extract showed antimalarial activity and study has validated its use by the locals in the treatment of malaria in most developing countries. Recommendations are made for the isolation and identification of bioactive substance for possible drug development.