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## GC-MS, AAS, antioxidant and antiplasmodial activities of methanolic leaf extract of *Morinda lucida* (Ewe Oruwo) in male swiss mice infected with *Plasmodium berghei* NK65

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Medicinal plants have been used for the treatment of many infections and diseases including malaria. The study was conducted to determine the effect of *In-vivo* anti-plasmodial and antioxidant properties of methanolic leaf extract of *Morinda lucida* in swiss albino mice infected with *Plasmodium berghei* NK65. The GC-MS result of the *Morinda lucida* shows the presence of five bioactive compounds. It was also observed that the plant contains the following minerals: copper, phosphorus, potassium, magnesium and iron. The phytochemicals and antioxidant property of the plant was also determined. Swiss albino mice were inoculated intraperitoneally with *Plasmodium berghei* NK65. Thirty-five mice were grouped into seven groups, five per group. Group A were not infected with *P. berghei*. Group B, C and D served as the negative and positive control groups while Group E, F and G were treated with 400, 600 and 800 mg/kg body weight of methanolic leaf extract of *Morinda lucida*. The extract caused 30.96%, 32.93% and 67.24% reduction in parasitemia at 400, 600 and 800 mg/kg body weight respectively while chloroquine exerted 96.53% and artesunate exerted 92.03% reduction at 10 mg/kg body weight respectively. The hematological parameters showed that the extract is not hematotoxic since it significantly ( $P<0.05$ ) reduced WBC count, and increase RBC, HGB, and HCT values in the treated mice compared to the infected untreated mice. The histopathological study shows that the plant reduces the damage caused by the parasite. This study shows that the mean lipid peroxidation (MDA) level was significantly decreased in the malaria treated groups (Group C, D, E, F and G) compared to the negative control group. There was also a significant increase in the total protein, catalase, reduced glutathione, SOD% inhibition, SOD unit and Vitamin A levels in the liver homogenate of animals treated with chloroquine, artesunate and extract of *Morinda lucida* compared to that of the negative control group. The study shows that *Morinda lucida* possess antiplasmodial activity.

## Ticks and tick-borne infections in some livestock slaughtered at Gwagwalada abattoir, in the Federal Capital Territory, Abuja, Nigeria

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Generally, the parasites transmitted by ticks constitute a major health problem in livestock and the livestock industry. The lean information on the ticks and their borne information in Abuja necessitated the survey to provide a checklist of ticks found in the study area a survey of ticks and tick-borne infections was carried out between June and November 2010. The 200 animals were sampled, only the cattle were infected with *Babesia marginale* 4 (4.00%), *Anaplasma bigemina* 2 (2.00%) and *Anaplasma central* 2(2.00%) but none of the in sheep and goats were infected with any of the parasite. Among the ticks collected were *Amblyomma variegatum* (38:45.78%) with higher occurrence, while others include; *Hyalomma truncatum* (20:24.10%), *Boophilus decoloratus* (16:19.28%) *Repiaphallus spp.* (8:9.64%) and *Ornithodoros spp* (1:1.26%) being the least. The relationship between infection rate and sexes of cattle showed a significant difference at ( $P<0.05$ ) while there was no significant difference ( $P>0.05$ ) in relation to age of the cattle using Chi-Square. The current study was able to provide baseline information on prevalence of ticks and their borne infections. This therefore poses great consequences to livestock in Gwagwalada, FCT Abuja, Nigeria.