**BACKGROUND**

- Malaria infection is prevalent in tropical and sub-tropical areas of the world
- Children (below 5 years), pregnant women, patients with HIV/AIDS as well as non-immune immigrants are considerably at higher risk
- Some medicinal plants are effective in the management of malaria infection
- *Detarium microcarpum* is used traditionally in the treatment of malaria and other diseases such as diabetes and hypertension
- *Detarium microcarpum* grows naturally in the drier regions of West and Central Africa
- In Nigeria, it is used by the Lala tribe and Gwaris in the treatment of malaria
- Scientific data is lacking on the antimalarial potential of the plant

**OBJECTIVE**

- To evaluate the anti-plasmodial potential of *Detarium microcarpum* methanol stem bark extract using curative, suppressive and prophylactic models

**MATERIALS AND METHODS**

- Fresh stem barks of *Detarium microcarpum* were collected, identified and authenticated
- Adult Swiss albino mice of both sexes were allowed to acclimatize and maintained under standard laboratory conditions
- Chloroquine-sensitive *Plasmodium berghei berghei* was maintained by continuous intraperitoneal inoculation from a donor mouse to a fresh mouse after every four days
- Evaluation of the activity of the extract against established infection (curative test) was carried out as described by Ryley and Peters
- Evaluation of the activity of the extract against early infection (suppressive test) was conducted as described by Peters
- The prophylactic activity of the extract was assessed using the method described by Peters
- Parasitemia was determined by microscopic examination of giemsa stained thin blood smear
- Data were analysed using ANOVA followed by Dunnett’s post hoc test

**RESULTS**

*Figure 2: Curative effect of the extract in Plasmodium berghei berghei infected mice*

- The extract at the doses of 200, 400 and 800 mg/kg showed a significant \( p < 0.001 \) decrease in the average % parasitemia level with 83.34, 90.03 and 86.43 % parasite clearance respectively when compared to the negative control.

*Figure 3: Suppressive effect of the extract in Plasmodium berghei berghei infected mice*

- The extract showed a significant \( p < 0.001 \) reduction in the average % parasitemia level compared to the negative control, at the doses of 200, 400 and 800 mg/kg with a chemoprophylaxis effect of 81.63%, 76.18% and 64.00% respectively.

**CONCLUSION**

- The methanol stem bark extract of *Detarium microcarpum* possesses significant antiplasmodial activity
- This study supports the ethno-medicinal use of the plant in the treatment of malaria infection

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