THE IN VITRO ANTIMALARIAL ACTIVITY OF THE EXTRACTS OF Cymbopogon citratus COMMONLY USED IN TRADITIONAL MEDICINE IN NIGERIA.

SHA’A, K. K.1, 2*, AJAYI, J. A.3, OGUCHE, S.4 & WATILA, I. M.4

1College of Science and Technology, Adamawa State Polytechnic, P. M. B. 2146, Yola, Nigeria.
2Department of Zoology, University of Jos, P. M. B. 2084, Jos, Nigeria.
3Department of Paediatrics, Jos University Teaching Hospital, Jos, Nigeria.
4Department of Paediatrics, State Specialists Hospital, P. M. B. 1014, Maiduguri, Borno State, Nigeria.

ABSTRACT

Plasmodium falciparum resistance to almost all anti-malarial drugs has to a large extent necessitated the search for new antimalarial compounds. In this study, the in vitro anti-malarial activities of the crude aqueous and ethanol extracts of Cymbopogon citratus, was evaluated against 14 fresh isolates of P. falciparum from Damboa, Borno State, Nigeria. Acute toxicity test and anti-inflammatory activity of the extracts were also determined. There was a significant inhibition in schizont maturation relative to control (P = 0.05). Water extract exhibited higher antimalarial activity of 69.42%, IC50 of 23.4µg/ml and ethanol extract had an activity of 67.91%, IC50 of 29.6µg/ml. Both extracts showed moderate antimalarial activity. The extracts were found to be non-toxic in rats and showed a good measure of anti-inflammatory activity. This result justifies the traditional use of the plant in malaria treatment. Further work is suggested to isolate, identify and characterize the active principles from the plant.

Keywords: Antimalarial activity, Plasmodium falciparum, plant extract, malaria
*Correspondence: kiliobas@yahoo.co.uk