

IN-VITRO ANTIMALARIAL ACTIVITY OF *Lantana camara*
ISOLATES ON CHLOROQUINE RESISTANT (W-2) *Plasmodium*
falciparum PARASITE CLONES.



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ABSTRACT

Bioassay guided chromatographic separation of the methanol extract of *Lantana camara*, which is used by the Luo community in Nyanza Province of Kenya to control malaria, led to the isolation of four pure compounds; **34**, **35**, **36** and **37**. A graphical and regression analysis done by spss database on larval mean mortality at different concentrations showed that compound **34** had a high antilarval activity of $LC_{50} = 45.05\text{ppm}$ against the *Anopheles gambiae* larvae. The same compound showed an antiplasmodial activity of $IC_{50} = 21.79 \pm 0.59\mu\text{g/ml}$ as well as a harmonious drug interaction of synergism when combined with Artemisinin against the Chloroquine resistant (W-2) *Plasmodium falciparum* parasite clones when subjected to GraFit database. However, the crude methanol extract showed a higher activity against both the *An. Gambiae* larvae and *P. falciparum* parasite clones. The structure of compound **34** aided by IR, $^1\text{H-NMR}$ and $^{13}\text{C-NMR}$ spectra revealed it as 22 β -[(S)-2-Methylbutenyloxy]-3-oxoolean-12-en-28-oic acid.