

1 ETHNOPHARMACOLOGICAL RELEVANCE:

The spread of drug resistant *Plasmodium falciparum* strains necessitates search for alternative newer drugs for use against malaria. Medicinal plants used traditionally in preparation of herbal medicines for malaria are potential source of new anti-malarial drugs.

2 AIM OF THE STUDY:

To identify the anti-plasmodial potential of twelve plants used in preparing herbal remedies for malaria in Kilifi and Tharaka districts of Kenya.

3 MATERIALS AND METHODS:

Twelve plants used traditionally for anti-malarial therapy in Kilifi and Tharaka districts were extracted with water/methanol yielding twenty-three extracts. The extracts were tested against chloroquine sensitive (NF54) and resistant (ENT30) *P. falciparum* strains in vitro using (3)Hypoxanthine assay.

4 RESULTS:

Seven (30%) extracts showed activity against *P. falciparum* with IC(50) values below 20 microg/ml. The remaining 16 extracts showed low or no activity. The most active extracts were from *Zanthoxylum chalybeum* (Rutaceae) with an IC(50) value of 3.65 microg/ml, *Cyperus articulatus* (Cyperaceae) with 4.84µg/ml, and *Cissampelos pareira* (Menispermaceae) with 5.85 microg/ml.

5 CONCLUSIONS:

This study revealed plants, that are potential sources of anti-malarial compounds. Anti-plasmodial activities of extracts of *T. simplicifolia*, *C. pareira*, and *C. articulatus* are reported for the first time.