

Methanolic and water extracts of five medicinal plant species used for treatment of malaria in traditional/cultural health systems of Kwale people in Kenya were tested for antimalarial activity against *Plasmodium falciparum* and *Plasmodium berghei*, respectively and for their cytotoxic effects. The most active extracts ($IC_{50} < 10$ microg/ml) screened against chloroquine (CQ) sensitive (D6) and resistant (W2) *P. falciparum* clones, were the water and methanol extracts of *Maytenus undata* (Thunb.) Blakelock (Celastraceae), methanol extracts of *Flueggea virosa* (Willd.) Voigt (Euphorbiaceae), *Maytenus putterlickioides* (Loes.) Excell and Mendoca (Celastraceae), and *Warburgia stuhlmannii* Engl. (Canellaceae). These extracts showed various cytotoxic levels on Vero E6 cells with the water extract of *M. undata* exhibiting least cytotoxicity. At least one of the extracts of the plant species exhibited a high chemo suppression of parasitaemia >70% in a murine model of *P. berghei* infected mice. These results indicate that there is potential for isolation of a lead compound from the extracts of the five plants. *W. stuhlmannii* and *M. putterlickioides* have not been reported before for antiplasmodial activity.