

Publication

Antiplasmodial, anti-trypanosomal, anti-leishmanial and cytotoxicity activity of selected Tanzanian medicinal plants

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The antiplasmodial, anti-trypanosomal and anti-leishmanial activity of 25 plant extracts obtained from seven Tanzanian medicinal plants: *Annickia* (*Enantia*) *kummeriae* (*Annonaceae*), *Artemisia annua* (*Asteraceae*), *Pseudospondias microcarpa* (*Anacardiaceae*), *Drypetes natalensis* (*Euphorbiaceae*), *Acridocarpus chloropterus* (*Malpighiaceae*), *Maytenus senegalensis* (*Celastraceae*) and *Neurautanenia mitis* (*Papilionaceae*), were evaluated in vitro against *Plasmodium falciparum* K1, *Trypanosoma brucei rhodesiense* STIB 900 and axenic *Leishmania donovani* MHOM-ET-67/82. Out of the 25 extracts tested, 17 showed good antiplasmodial activity (IC_{50} 0.04-5.0 microg/ml), 7 exhibited moderate anti-trypanosomal activity (IC_{50} 2.3-2.8 microg/ml), while 5 displayed mild anti-leishmanial activity (IC_{50} 8.8-9.79 microg/ml). *A. kummeriae*, *A. annua*, *P. microcarpa*, *D. natalensis*, *M. senegalensis* and *N. mitis* extracts had good antiplasmodial activity (IC_{50} 0.04-2.1 microg/ml) and selectivity indices (29.2-2,250 microg/ml). The high antiplasmodial, moderate anti-trypanosomal and mild anti-leishmanial activity make these plants good candidates for bioassay-guided isolation of anti-protozoal compounds which could serve as new lead structures for drug development

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