Evaluation of in vitro and in vivo antitrypanosomal activity of aqueous and methanol leaf extracts of *Clutia abyssinica* (Euphorbiaceae) and *Verbascum sinaiticum* (Scrophulariaceae) against *Trypanosoma congolense* field isolate

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Aqueous and methanol leaf extracts of *C. abyssinica* and *V. sinaiticum* were investigated for the presence of secondary metabolites, there in vitro and in vivo activity against *Trypanosoma congolense*, the main causative agent of African animal trypanosomiasis in Sub-Saharan Africa and Ethiopia. The in vitro assay was carried out by monitoring test concentrations of 4, 2, 1, 0.4 and 0.2 mg/ml for cessation or reduction in motility of trypanosomes followed by monitoring for loss of infectivity to mice. The in vivo antitrypanosomal efficacy of the extracts was evaluated in Swiss albino mice infected with *T. congolense* field isolate. The leaf extracts were administered 12 days post-infection at peak parasitaemia level of ~108 trypanosomes/ml at doses of 100, 200 and 400 mg/kg by intraperitoneal injection once daily for 7 days. Parasitaemia, packed cell volume (PCV), mean survival time and change in body weight were used as indices for monitoring the efficacy of the extracts by comparing with the positive control: 28 mg/kg dose of diminazene aceturate and negative control: 2% tween 80 treated groups. Phytochemical screening revealed presence of alkaloids, anthraquinones, flavonoids, glycosides, phenolic compounds, saponins, steroids, terpenes and tannins. An appreciable in vitro activity was attained by the methanol extract of *C. abyssinica* at 4 mg/ml concentration which ceased motility of trypanosomes within 30 min and which caused loss of infectivity of trypanosomes to mice, which remained aparasitaemic for 21 days after the inoculation of the in vitro mixtures. The extracts had a lethal dose greater than 2000 mg/kg and there were no evidences of acute toxicity at the doses tested. Highly significant (p<0.001) reduction in pre-treatment parasitaemia by 3.91% (7.38±0.18) and increase in PCV by 1.12% (48.66±0.20) was noticed in animals treated by the methanol leaf extract of *C. abyssinica* at dose of 400 mg/kg; while body weight improvement by 1.67% (22.54±0.28) and mean survival time of 40.20 ± 0.37 days was seen in the group treated by 400 mg/kg methanol leaf extract of *V. sinaiticum*. In general, the results obtained suggest ethno-pharmacological usefulness of these plants and necessitate further studies to be carried on isolated active substances from these plants.

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