

DRUG DISCOVERY, DESIGNING CHEMISTRY AND PHARMACEUTICAL ANALYSIS &

BIOBETTERS AND REGULATORY AFFAIRS

June 27-28, 2018 | Vancouver, Canada

In vivo and in vitro* antitrypanosomal evaluation of crude methanolic extracts of *Crotalaria albicaulis* and *Cistanche phelypaea* against *Trypanosoma evansi

Yitagesu Tewabe

Addis Ababa University, Ethiopia

African trypanosomiasis is a major disease of economic and public health importance affecting agricultural and human development. The search for alternative agents against African trypanosomiasis is justified by various limitations of existing chemotherapeutic agents. Thus, the aim of this study was to evaluate the *in vivo* and *in vitro* antitrypanosomal activity of the methanolic crude extracts of leaves of *Crotalaria albicaulis* and *Cistanche phelypaea* against *Trypanosoma evansi* isolate. The fresh leaves of both plants were extracted by percolation technique using methanol to obtain the crude extracts. For the *in vivo* assay, plant extracts at doses of 100, 200 and 400 mg/kg body weight were administered intraperitoneally daily for 7 days to mice infected with *T. evansi*. *In vitro* trypanocidal activity was performed in triplicate in 96 well micro titer plates. Diminazene aceturate and dimethyl sulfoxide were used as positive and negative controls, respectively. The *in vitro* study showed that the methanolic extract of *C. albicaulis* at 4.0mg/mL concentration completely ceased parasite motility after 40 minutes. The plant also significantly ($p < 0.05$) prolonged infection period during *in vivo* infectivity test. Moreover, at 400 mg/kg dose, *C. albicaulis* and *C. phelypaea* plants exhibited a mild *in vivo* anti-trypanosomal activity against *T. evansi*. This study established that leaves of *C. albicaulis* and *C. phelypaea* have a mild *in vivo* and *in vitro* antitrypanosomal activity and can be considered as a potential source of new drugs for the treatment of camel trypanosomiasis.

yitagesu.tewabe@aau.edu.et