

Methanolic Extract of the Exudates of Aloe Otallensis and Its Effect on Leishmania Donovanii Parasite

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Abstract : Objective: This study evaluates the antileishmanial activity of the methanolic extract of Aloe otallensis (A. otallensis) on the promastigote stage of Leishmaniadonovani (L. donovani) as compared to standard drugs and to screen its phytochemical constituents. Methods: Phytochemical screening was done by using the method mentioned by Evans and Trease on methanolic extract of the exudates of Aloe otallensis leaves. The extract was also evaluated for in vitro antileishmanial activity against L. donavani, which is found in the Parasitology Unit of Black Lion Hospital. The result was compared to standard drugs of sodium stibogluconate, milfostin and paramomycin. Results: The extract has good antileishmanial activity with an IC50 of 0.123 0 µg/mL on L. donovani (AM 563). The experimental data showed that relatively, it had better activity than paramomycin and milfostin but less activity than sodium stibogluconate. The data analyses were done by GraphPad Prism version 5 software after it was read by an ELISA reader at the wavelength of 650 nm. The phytochemical screening of the exudates of A. otallensis showed the presence of phenol, alkaloid and saponin. Conclusions: The methanol extract of the exudates of A.otallensishas a good anti- leishmaniasis activity and this may be attributed to phenol, alkaloid and saponin present in the plant. But it needs further analysis for the conformation of which constituent presents in high concentration to know which one has the strongest effect.

Keywords : anti leshimaniasis, aloe otallensis, leshimania ethiopica, IC50

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