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Phytochemical screening of the exudate of *Aloe otallensis* and its effect on *Leishmania donovani* parasite

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Objective: To evaluate antileishmanial activity of methanolic extract of *Aloe otallensis* (*A. otallensis*) on the promastigote stage of *Leishmania donovani* (*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 *A. otallensis* leaves. The extract was also evaluated for *in vitro* antileishmanial activity against *L. donovani* which was found at the Parasitology Unit of Black Lion Hospital. The result was compared to standard drugs of sodium stibogluconate, milfostin and paramomycin.

Results: The extract showed 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 ELISA reader at the wave length 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. otallensis* has 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.

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