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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 *Aloe otallensis* leaves. The extract was also evaluated for *in vitro* antileishmanial activity against *L. donovani* which is found from the Parasitology Unit of Black Lion Hospital. The result was compared to standard drugs of sodium stibogluconate, milfostin and paramomycin.

Results: The extract has a 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.

Recent Publications

1. Tesfaye et.al. journal of costal life medicine 2016;4(6) (Principal investigator)
2. Animut et al. parasite & vectors 2012, 5:117 (acknowledgement part)
3. Animut et al. malaria journal 2013,12:393 (acknowledgement part).

Biography

Tesfaye Zerihun graduated in Chemistry Diploma from Kotebe teaching college on JUN, 2006 and Bachelor of pharmacy on July 2011 from Addis Ababa University and employed at Addis Ababa university akilu Lema institution of path biology Research center on September 2007 as Technical Assistance and served for the past 5 years. Giving Technical support for Master and PhD students both on the field and Laboratory. Some of the paper that I was participate and included on the acknowledgement part are: Currently, He is working as a Senior Clinical Pharmacist at Addis Ababa University, college of Health Science, Black lion specialized Teaching Hospital in Mentoring under graduate pharmacy students who are coming to the hospital for clinical attachment both at the ward and dispensary area .I am also participating in some of Clinical research which is under go in the Hospital beside the routine work.

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