

Methanolic extract of the exudates of Aloe otallensis and its effect on Leishmania aethiopica parasite

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Background & objectives: Several plant products have been tested and found to possess antileishmanial activity. The present study was undertaken to evaluate antileishmanial activity of methanolic extract of Aloe otallensis on the promastigot stage of Leishmania aethiopica comparing to standard drugs and also tried to screen its phytochemical constitute.

Methods: Phytochemical screening was done using the method mentioned by Evan and Trease on methanolic extract exudates of Aloe otallensis leaf. The extract was also evaluated for in vitro antileishmanial activity against Leishmania aethiopica which is found from the black lion hospital parasitology unit. The result was compared to standard drug of Sodium stibogluconate, milfostin and paramomycin.

Result: The extract has a good antileishmaniacidal activity with an IC₅₀ of 0.041 µg/ml on L. aethiopica (LDC/134). The experimental data shows that relatively it has better activity than paramomycin and milfostin but less activity than sodium stibogluconate. The data analyses was done by pad graph prison version 5 software after it was read by ELISA reader at the wave length of 650 nm. The phytochemical screening of the exudates of aloe otallensis showed the presence of phenol, alkaloid and saponin.

Conclusion: The methanol extract of exudate of Aloe 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 present in much concentration and to know which one have highest role.

Keywords: Anti leishmaniasis, Aloe otallensis, Aethiopica, IC₅₀.

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. He 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. He gives Technical support for Master and PhD students both on the field and Laboratory. Currently, he is working as a chief 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. He is also participating in some of Clinical research which is under go in the Hospital beside the routine work.

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