

Evaluation of leishmanicidal effect of *Calotropis gigantea* extract by in vitro leishmanicidal assay using promastigotes of *L. major* (Poster)

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Introduction

Cutaneous leishmaniasis (CL), which caused by the different species of *Leishmania*, produces a skin ulcer that heals spontaneously in most cases, leaving an unsightly scar. In the traditional medicine, the extracts of different species of *Calotropis gigantea* has been successfully used for the treatment of cutaneous leishmaniasis in folklore medicine in south east of Iran. There has been no scientific proof for this activity and in this study the antileishmanial effect of percolated and soxhlet extract of *Calotropis gigantea* was evaluated on promastigotes of *L. major* in vitro.

Objectives

To evaluate the antileishmanial activity of *Calotropis gigantea* extracts and its fractions.

Methods

Four different concentration of extract either percolated or soxhlet (0.12, 0.25, 0.50 and 1.0 mg/ml), one positive control, one negative control and one solvent (DMSO) control were prepared and were placed in 24 well plates that contained 50,000 parasites/well. Positive control group contained Amphotricin B (0.5 mg/ml) and negative control group contained only culture media. Then they were incubated at 25 °C for 3 days and amount of parasites in each well determined on days 1, 2 and 3 of experiment.

Results

The results showed that the Amphotricin B and both percolated and soxhlet extracts (methanol and DMSO solvent) in concentration of 1 mg/ml killed all of the parasites and EC₅₀ in percolated and soxhlet extracts and DMSO solvent was between concentrations 0.25 mg⁵⁰/ml and 0.5 mg/ml. The control solvent (DMSO) had no significant effect on the *L. major*.

Conclusion

These results indicated that both macerated and soxhlet extracts of *C. gigantea* have favorable leishmanicidal activity.

Keywords: *Calotropis gigantea*, AntiLeishmanial activity, *Leishmania major*, Promastogotes

Selected References

None

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