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Effect of Methanolic Extracts of *Artemisia aucheri* and *Camellia sinensis* on *Leishmania major*
(In Vitro)

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Abstract: Aim: Infections caused by protozoa of the genus *Leishmania* are major worldwide health problems with high endemicity in developing countries. The incidence of leishmaniasis has increased in the absence of a vaccine. Usual drugs for treatment of the disease have many side effects; therefore, there is an urgent need to find new effective alternatives. The plant kingdom is a valuable source of new medicinal agents. Methods: In this randomized, one-blind clinical trial, the in vitro leishmanicidal effects of *Artemisia aucheri* and *Camellia sinensis* on *Leishmania major* were evaluated. The methanolic extracts were prepared by percolation method. The extracts were dried and redissolved in PBS+DMSO 1% solvent. *L. major* cells treated with five concentrations (150, 300, 450, 600, and 750 µg/ml) of the extracts and an untreated control group were used in the study. The number of promastigotes in each concentration was calculated using a hemocytometer slide at time zero and at 24, 48, and 72 hours after being harvested. Results: Methanolic extract of *A. aucheri* inhibited the parasite multiplication at doses of 150, 300 and 450 µg/ml at 48 and 72 hours of culture. Doses of 600 and 750 µg/ml showed the same effect at 24, 48 and 72 hours of culture (P< 0.05). Methanolic extract of *C. sinensis* showed inhibition of parasite multiplication when administered at doses of 150, 300, 450, 600 and 750 µg/ml at 72 hours (P<0.05). Conclusion: These results provide a new perspective on drug development against *Leishmania*. The extract of *A. aucheri* at 750 µg/ml is strikingly potent against *Leishmania*, inhibiting the growth of promastigotes of *L. major* after 72 hours.

Key Words: *Leishmania*, *Artemisia aucheri*, *Camellia sinensis*, medicinal plant, promastigote

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