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Toronto, Canada***In vitro* anti-leishmanial activity of *Artemisia dracunculus* and *Heracleum persicum* extracts in comparison with glucantime**Batool Sadeghi-Nejad¹, Shahram Khademvatan², Alborz Eskandari³ and Sedigheh Yusef Naanaie⁴¹Abadan School of Medical Sciences, Abadan, Iran²Urmia University of Medical Sciences, Iran³Jundishapur University of Medical Sciences, Iran⁴The Agricultural and Natural of Resources Center, Iran

Background & Objectives: Cutaneous leishmaniasis (CL) is one of the most common parasitic diseases. It is one of the major public health in developing countries and throughout the world. Pentavalent antimonial compounds like pentostam and glucantime has been used to treat CL for the last 50 years. The use of these compounds has some limitations such as long duration of treatment, high expenses of drugs, and methods of drug use which are intradermal and intramuscular injection. Beside these, lack of response to the treatment in 10-15% of cases and toxic effects on heart, liver, and kidneys are other possible side effects. Hence, the objective of the present survey was to state the antileishmanial activity of two herbal medicine (*Artemisia dracunculus* and *Heracleum persicum*) extracts were evaluated against *Leishmania major* and *Leishmania infantum* using colorimetric MTT (2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-2H-tetrazolium bromide) assay and compared to the glucantime as a reference.

Materials & Methods: The leaves extracts of selected plants were obtained by maceration. The *in vitro* assays were carried out on *L. major* and *L. infantum* using colorimetric MTT assay in comparison with glucantime. The concentration-response

curves tested extracts and glucantime solutions were designed and IC50 values were located.


Results: Anti-Leishmania effects of *A. dracunculus* and *H. persicum* on *L. major* and *L. infantum* promastigote were revealed with 50% inhibitory concentration (IC50) values of 49.67 and 42.23 mg ml⁻¹ for *A. dracunculus*, 81.15 and 73.17 mg mg ml⁻¹ for *H. persicum*. In comparison with the standard drug, glucantime had IC50 value of 40.2 mg ml⁻¹ for *L. major* and 18.5 mg ml⁻¹ for *L. infantum* promastigote after 72 hours incubation respectively.

Conclusion: These results revealed that compounds from *Satureja khuzestanica* and *Heracleum persicum* have anti-leishmania properties that necessary to survey the effects of these extracts on *leishmania* genus in animal models in future.

Speaker Biography

Batool Sadeghi-Nejad is working at Abadan School of Medical Sciences, Abadan, Iran. She has published many research papers.

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