

## References

- [1] Nadjafi, F.; Koocheki, A.; Honermeier, B.; Asili, J. *Jeobp*, 2009, 12(1), 97-110.  
[2] British pharmacopoeia (1993). HMSO: London, UK.

## IN VITRO ANTILEISHMANIAL ACTIVITY OF *FERULA ASSA-FOETIDA* ETHANOL EXTRACTS AGAINST LEISHMANIA MAJOR PROMASTIGOTES STRAIN MRHO/IR/75/ER

Fariba Khoshzaban<sup>1\*</sup>, Alireza Naiini<sup>1</sup>, Masood Vahdani<sup>2</sup>, Meisam Saboori<sup>2</sup>

<sup>1</sup>Parasitology and Mycology Department, Shahed University, Tehran, Iran

<sup>2</sup>Medical Sciences Student, Shahed University, Tehran, Iran

E-mail: fkhosh\_99@yahoo.com

Leishmaniasis is a family of diseases caused by protozoan parasites of the genus *Leishmania*. Various *Leishmania* species can cause human infection, producing a spectrum of clinical manifestations. The current treatments are unsatisfactory, and in absence of a vaccine, there is an urgent need for effective drugs to replace/supplement those currently in use. Several anti-leishmanial drugs of choice are of plant origin. Many of the available drugs against the disease are toxic and in certain cases parasite drug resistance is developed [1]. The development of new compounds is urgently required. *Ferula assa-foetida* is an herbaceous wild plant native to Iran. In Iranian traditional medicine, *Ferula assa-foetida* gum extract has been used as a remedy for abdominal pain, constipation and diarrhea and as an antihelminthic. Although there is some evidence for the anticoagulant action, antispasmodic and hypotensive effects of *F. assafoetida* gum [2]. In this study, we want to determine the leishmanicidal activity of the ethanol *Ferula assa-foetida* extracts against *Leishmania major* in vitro. The leishmanicidal activity of ethanol extract of *Ferula assa-foetida* against *Leishmania major* free living promastigotes was evaluated, using microscopic examinations. Ethanol extract of *Ferula assa-foetida* highly effective against *Leishmania major* promastigotes (IC<sub>50</sub>=2±0.12 microg/ml; ID<sub>50</sub>=0.65±0.02 3 microg/ml; LD<sub>50</sub>=2.1±0.096 microg/ml). The extract at 1.25 microg/ml totally eliminated the promastigotes 3 days of treatment. The present study suggests that ethanol *Ferula assa-foetida* extracts might be a potential source of anti-leishmanial compounds.

## References

- [1] Esfandiarpour I, Alavi A. *Int J Dermatol*. 2002, 41, 521-4.  
[2] Fatehi M, Farifteh F, Fatehi-Hassanabad Z. *Journal of Ethnopharmacol*. 2004, 91, 321-327.