



IN VITRO ANTI- INFLAMMATORY ACTIVITY OF MORINGA OLIEFERA. LAM

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ABSTRACT

The methanol extract of whole plant of *Moringa oliefera. Lam* was assessed for its anti-inflammatory activity by *in-vitro* methods. *In-vitro* anti-inflammatory activity was evaluated by Inhibition of albumin denaturation technique. The results showed that *moringa oliefera* Lam ethanolic extract at a concentration range of 100-500µg/ml significantly ($p < 0.01$) protects the heat-induced protein denaturation. The results obtained in the present study indicate that methanol extracts of *Enicostemma axillare* can be a potential source of anti-inflammatory agents.

Key words: *Moringa oliefera* Lam, Diclofenac, *invitro* Anti-inflammatory activity.

INTRODUCTION:

Herbal therapy, although still an unwritten science, is well established in some cultures and traditions, and has become a way of life for almost 80% of the people in rural areas, in the world. *Moringa oleifera* Lam. is a small or medium-sized tree, about 10m high, found wild in the sub-Himalayan tract, from Chenab eastwards to sarda and cultivated all over the plants of the India. (Nandini et al.,) The plant /tree *M. Oliefera Lam.* Is called in Sanskrit as sigru and in Hindi as Soanjan. The tree is well known for its various medicinal properties and a common ingredient of many poly herbal formulations for a variety of claims. Ethanolic extract of leaves show the presence of amino acids, alpha and

beta – carotene, sterols, terpenes, saponins, tannins, carbohydrates, glycosides, Alkaloids, flavonoids. (Faizi et al., 1995; Shaft and Ikram, 1982). The present study was focused to evaluate the anti-inflammatory action of ethanolic extracts of leaves of *moringa oliefera*.

EXPERIMENTAL

Materials:

Plant Material the leaves collected from tree near Baramati, Maharashtra.

Preparation of extracts:

The fresh leaves were collected, shade dried and powdered. The powder was extracted with alcohol by soxhlet extractor by decoction, to obtain alcoholic extracts respectively the solvents were removed and marcs (residue) obtained were dried in a desiccator, refrigerated until their use. These dried residues were used for *in vitro* anti-inflammatory action by Inhibition of albumin denaturation technique.

Experimental Work:

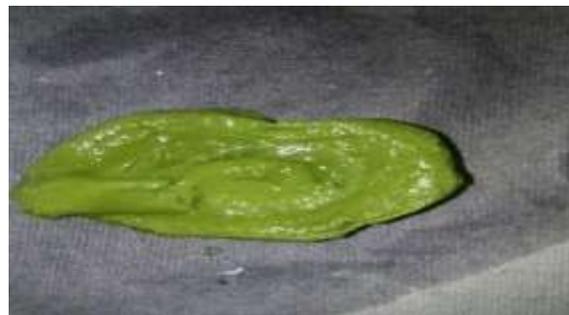
In vitro anti-inflammatory activity of Ethanolic (90%) extract of the leaves of *M.Oliefera* by Inhibition of albumin denaturation technique. Take 1ml solution of plant extract with ethanol solvent and dilute with Sodium Diphosphate (0.2 M, pH 7.4) and then to it add 1ml of 1% mM Egg Albumin solution in Sodium Diphosphate and Incubate at $27\pm 1^{\circ}\text{C}$ for 15 min. and Denaturate it by heating at 60°C for 10 min., cool it and then observed turbidity and same procedure perform with standard drug Diclofenac. (Venkataswera Rao *et al.*, 1999; Pawar *et. al.* 2012)

Observation:

The Turbidity of Ethanolic Extract of leaves of *M. Oliefera* solution observed is less than that of standard drug Diclofenac, but the presence of turbidity shows that the given plant extract shows *in vitro* anti-inflammatory activity as that of Standard Drug Diclofenac by inhibition of Albumin Denaturation Technique.

CONCLUSION

The Given sample of Test solution i.e. Ethanolic Extract of the leaves of *M.Oliefera* shows *in vitro* anti-inflammatory activity by inhibition of Albumin Denaturation Technique.



Anti-inflammatory Activity of Ethanolic Extract of Leaves of *M. Oliefera*



Anti-inflammatory Activity of Standard Drug (Diclofenac)

REFERENCE:

1. Nadkarni K.M., Nadkarni A.K. and Chopra R.N. The Indian Materia Medica, Popular Prakasan. Bombay 1,811 – 916.
2. Faizi S., Siddiqui B.S. Saleem P., Siddiqui S., Aftab K., Gilane A.U.H., Phytochemistry 1995., 38(4), 957-963.
3. Shaft N., Ikram M., Int., J crude Drug Res., 1982, 20 (4), 183 – 186.
4. Venkataswera Rao K.N. *et.al.* Anti inflammatory activity of moringa oliefera.lam , Ancient Science of Life, Vol.No. 18 (3&4) January& April 1999, pages 195 – 198.
5. P. Y. Pawar *et. al.* Synthesis, characterization, Analgesic and Anti-inflammatory activity of Some 4, 5, 6, 7-tetrahydrobenzothiophene derivatives. Current Pharma Research, ISSN: 2230-7842, CPR 2 (4), 2012, 649-654.