027A

Screening for topical analgesic and anti-inflammatory properties of mother tincture of homeopathic medicine *Arnica montana* (Mountain Tobacco)

R Fernandopulle [1*], R V K Waravita [2], J Wijayabandara[3] and W Pathirana[4]

[1] *Department of Pharmacology, Faculty of Medicine, University of Colombo, Colombo 8*
[2] *Department of Chemistry, Faculty of Science, University of Colombo, Colombo 3*
[3, 4] *Department of Pharmacy, Faculty of Medicine, University of Colombo, Colombo 8*

Arnica montana (Family: Compositae) is an important medicinal plant used in European folk medicine and in homeopathic medicine, mainly for the topical treatment of bruises, sprains and contusions. The aim of this project was to investigate the topical anti-inflammatory and analgesic properties of homeopathic mother tincture of *Arnica montana*, through rat models.

Different strength ointments (2%, 4%, and 8% w/w) representing different doses (25.8, 51.6, 103.2 mg/kg) were prepared using mother tincture and screened for analgesia using tail flick test. The analgesic activity was compared with an allopathic drug; Diclofenac gel 1%. The *Arnica* 8% w/w mother tincture ointment was screened for the anti-inflammatory activity and compared with the activity of the allopathic drug; Diclofenac gel 1%. The mother tincture was fractionated using methylene chloride by solvent extraction technique. Each of the residues obtained by the extraction was screened for topical analgesic activity by preparing ointments. The methylene chloride fraction was carried out for TLC analysis for further characterization.

A significant analgesic activity was given one hour after the application of ointments. The *Arnica* 4% w/w and 8% w/w ointments showed significant activity when compared with the activity of control. *Arnica* showed a dose response activity. Topical application of 8% w/w ointment resulted in the inhibition of carrageenan-induced paw oedema in rats proving the anti-inflammatory activity of the mother tincture. A significant activity was seen four hours after the application of drug and the activity was increased during next hour.

A significant analgesic activity was shown by the methylene chloride fraction with activity very similar to Diclofenac gel 1%. There was no significant activity with aqueous fraction. Hence methylene chloride fraction was selected for further evaluation. TLC analysis of the methylene chloride fraction showed the presence of some compounds, probably sesquiterpene lactone (helenalin), carotenoids and fatty acids. The mother tincture of *Arnica montana* is a topical anti-inflammatory and analgesic agent.

*rohinifernandopulle@hotmail.com Tel: 011 2693500