

[P04-033]

ANTI-INFLAMMATORY STUDIES ON SELECTED HERBAL PREPARATIONS USED IN  
TRADITIONAL MEDICINE IN SRI LANKA

Sugandhika Suresh\*

*\*University of Sri Jayewardenepura, Sri Lanka*

Chronic inflammatory diseases pose a serious threat to the health of millions worldwide. Many plant extracts are being tested in search of safe herbal remedies as alternatives to existing allopathic drugs with undesired effects. Researchers from Sri Lanka who wished to carry out basic anti-inflammatory screening studies in rats had no access to a plethysmometer as there was only a single instrument in the country. The adjuvant-induced chronic arthritis rat model was also not established in Sri Lanka and in the present study, an attempt was made to establish the anti-inflammatory studies using this model. With a research grant from the University of Sri Jayewardenepura, I was able to purchase a plethysmometer. Many research students were trained to carry out the carrageenan-induced paw oedema tests to screen various plant extracts, functional foods and plant compounds for possible anti-inflammatory effects. The famous herbal drink prepared by the boiling the dried flowers of *Aegle marmelos* (bael), aqueous extracts of *Nyctanthes arbor-tristis* (night blooming jasmine), *Psychotria sarmentosa*, *Munronia pinnata*, *Achronychia pedunculata* and dried suspensions of dried American oyster and abalone mushrooms (*Pleurotus ostreatus* and *P. cystidiosus*) and the Ayurvedic medicines; Rasna saphthak and Sudarshana powder were studied for the anti-inflammatory effects in Wistar rats. All protocols for the animal studies were approved by the Ethics Review Committee of the Faculty of Medical Sciences, University of Sri Jayewardenepura. The adjuvant-induced arthritis rat model was successfully established. Arthritis was induced by a single intra-dermal injection of 0.1 ml of Freund's Complete Adjuvant (FCA) containing 0.05% w/v *Mycobacterium butyricum* suspension in sterile paraffin oil into a foot pad of the left hind paw of all rats. Extracts were administered prior to and following induction of arthritis in different groups of rats to determine the prophylactic and therapeutic effects respectively. All of the tested extracts showed statistically significant anti-inflammatory activity in Wistar rats. Activity guided fractionation was carried out to isolate active anti-inflammatory compounds of selected extracts. *Psychotria sarmentosa*, *Achronychia pedunculata*, *Aegle marmelos*, *Nyctanthes arbor-tristis* and the two traditional ayurveda drugs, Sudarshana powder and Rasna saphthak exerted highly significant prophylactic as well as