

## OP 14

### **Sub-chronic anti-inflammatory activity of novel herbal ointment “Jivadah” on formaldehyde induced rat hind paw oedema model**

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**Background:** Inflammation is a protective response of vascular and cellular elements of the tissue to harmful stimuli. Although inflammatory response is a protective mechanism, it can cause many diseases when they persist. As a result of the adverse effects of existing anti-inflammatory agents, attention has been focused on investigating the efficacy of plant-based drugs.

**Objective:** As the skin is considered a promising pathway for treating many chronic inflammatory diseases such as arthritis, the present study was focused on investigating the subchronic anti-inflammatory activity of a novel herbal ointment, i.e. Jivadah, containing extracts of *Areca catechu* (arecanut), *Alpinia galanga* (mahaarattha) rhizome and capsaicin (from *Capsicum annum*; green chilies), menthol and camphor as key ingredients.

**Method & Materials:** Ethical clearance for the animal study was obtained from the Ethics Review Committee of the University of Sri Jayewardenepura (MLS/08/18), Sri Lanka. A sub plantar injection of 0.1 mL of 2% v/v formaldehyde was used to induced chronic inflammation and left paw volumes were measured daily for seven consecutive days. The test rat group (n=6/group) was treated with the herbal ointment and the control rat group (n=6/group) was treated with the vehicle which is the base of ointment without active ingredients.

**Results:** The results showed that treatment with novel herbal ointment significantly ( $p < 0.05$ ) reduced paw oedema compared to the negative control throughout seven days 0.029, 0.002, 0.001, 0.004, 0.002, 0.001 were the corresponded P values for the 7 days . The maximum percentage inhibition of rat paw oedema was found to be 93.01% for the test ointment on Day 7.

**Conclusion:** In conclusion, these preliminary observations provide scientific evidence for the sub-chronic anti-inflammatory properties of *novel herbal ointment “Jivadah”*, and further studies will be undertaken to uncover some of the possible mechanisms of these actions.

**Acknowledgement:** The authors are grateful to Fairway Bio-Tech (Pvt.) Ltd. for the financial support.