

5th International Conference and Exhibition on

PAIN RESEARCH AND MANAGEMENT

October 05-06, 2017 London, UK

Antinociceptive activity of ethnomedicinal plant *Hydrocotyle javanica*

Krithika N¹ and Arumugasamy K²¹Quaid-e-Millath Government College for Women, India²Kongunadu Arts and Science College, India

Statement of the Problem: The pain sensory system protects the body and maintains homeostasis by detection, localization and identification of tissue damaging process. NSAIDS or non-steroidal anti-inflammatory drugs and opioid drugs are the two main classes of pain relievers that come with side effects such as gastric irritation. Today, the search for a drug without these side effects leads to a promising track of herbal medicines or herbal drugs. *Hydrocotyle javanica* Thunb. (Apiaceae) is an ethnomedicinal herb of the southern Western Ghats. The natives use it in treatment of asthma, nervous problem, toothache and few more. But still many other pharmacological potentials remain unexplored. The control of infections demands a drug with efficacy but without any side effects.

Methodology & Theoretical Orientation: This study has been attempted to elucidate the antinociceptive activity of this plant by Eddy's hot plate and heat conduction methods. An extensive literature survey depicted the medicinal uses of the present plant.

Findings: The methanol extract of the whole plant showed a significant effect in alleviating nociception in rat experimental models. In the Eddy hot plate method, the intensity of the analgesic effect of *H. javanica* was greater than that of standard drug indomethacin (9.18 ± 0.136) and control (2.80 ± 0.314) with a maximum (12.16 ± 0.281) in the 450 mg.kg-1 dosage whereas in the Heat Conduction Method animals treated with plant methanol extract evinced significant increase in the tail flick latency compared to control (1.906) with a maximum (9.926 ± 0.316) in the 450 mg.kg-1 dosage. Analgesic activity in both methods showed a dose dependent response by the experimental rat models.

Conclusion & Significance: *H. javanica* can be used as a novel therapeutic herbal ingredient in the future that has the potential to relieve mankind from pain and such associated diseases. Further studies on its molecular mechanism are warranted.



Figure 1: Probable mechanism of action of *H. javanica* methanol extract as an antinociceptive

Biography

Krithika N is a Faculty of Botany pursuing her PhD in the field of Medico-Botany under Prof. Arumugasamy. She is currently a full-time Research Scholar under the 12th plan of University Grants Commission, Faculty Development Programme, SERO, Hyderabad, India. Her in-depth knowledge in Botany especially, medicinal plants has helped in assessing the pharmacological aspects of an ethnomedicinal plant used by natives of Nilgiris, Tamilnadu, India. She has based her study with reference to *Hydrocotyle asiatica* (*Centella*) of family Apiaceae on which enormous studies have been reported. This is a first study on her chosen plant *Hydrocotyle javanica* Thunb.

krithikadharmahotmail.com