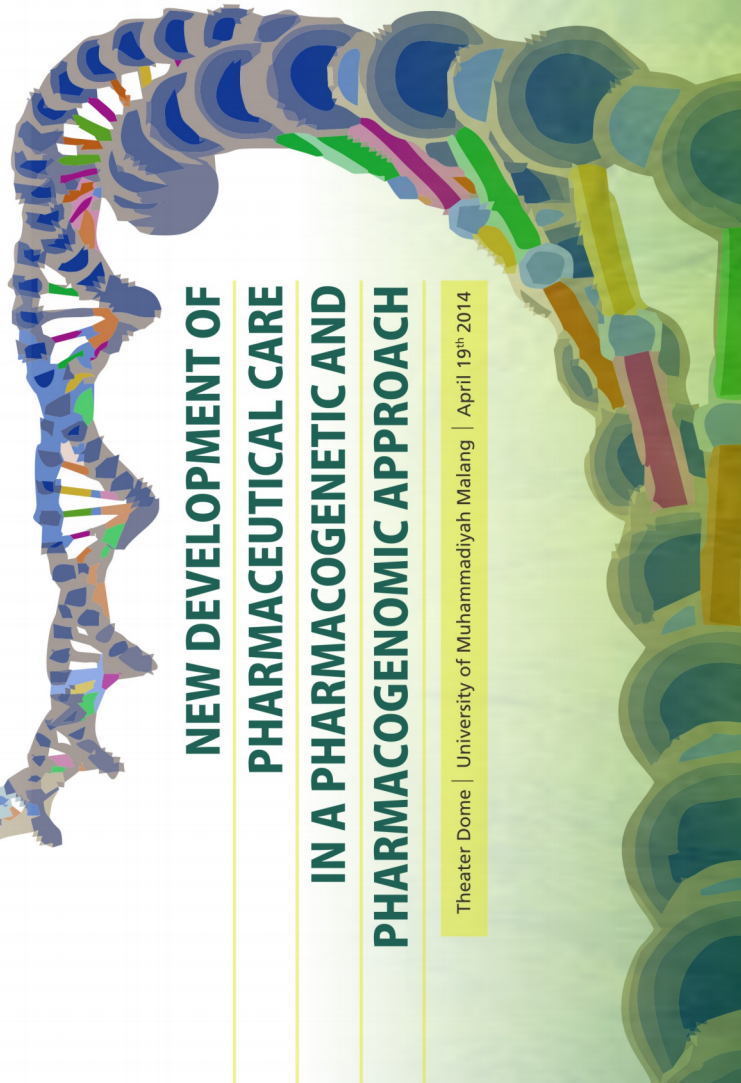


# PROCEEDING

The International Conference  
Pharmaceutical Care



## NEW DEVELOPMENT OF PHARMACEUTICAL CARE IN A PHARMACOGENETIC AND PHARMACOGENOMIC APPROACH

Theater Dome | University of Muhammadiyah Malang | April 19<sup>th</sup> 2014

PROCEEDING THE INTERNATIONAL CONFERENCE PHARMACEUTICAL CARE



Department of Pharmacy University of Muhammadiyah Malang  
Jl. Bendungan Sutarni No. 188 A, Malang, 65145  
Telp. (0341) 552443, Fax. (0341) 582060

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# SPINAL CORD HISTOLOGY AFTER GINGER OIL ADMINISTRATION IN MICE WITH COMPLETE FREUD'S ADJUVANT INDUCED INFLAMMATORY PAIN

**Fifteen Aprila F<sup>1</sup>, Alifia Rahardhini N.L<sup>1</sup>, Liliana I.K<sup>1</sup>**

<sup>1</sup>Bagian Farmasi Klinik dan Komunitas Fakultas Farmasi Universitas Jember

Correspondence :  
fiezz\_15@yahoo.co.id  
HP 08563175010

## ABSTRACT

**Background :** Inflammation is pain that caused by inflammation, one of them is bacteria. After long induction, this condition will cause chronic pain. Ginger is a plant that widely used for cooking, as flavour. Many study of ginger showed that ginger induced sleep and have a sedative and hypnotic effect. Sedative and hypnotic effect related to GABA action, that one of the mechanism for chronic pain therapy.

**Objective :** This research was observed the influence of ginger oil to spinal cord histology in CFA induced inflammatory pain.

**Methods :** Twenty five mice were divided into 5 groups i.e sham, negative control, ginger oil at three different doses (25,50,100 mg/kgBW). Inflammatory condition was induced by intraplantar injection of CFA (*Completed Freud's Adjuvant*). Ginger oil were administrated per oral once a day for seven consecutive days, at a week after CFA injection. Latency time toward thermal stimulus was measured on days 0, 1, 3, 5, 7, 8, 10, 12 and 14 after CFA injection. Paw thickness at the ipsilateral site was also measured on days 0, 1, 2, 3, 4, 5, 6, 7, 8, 10, 12 and 14 after CFA injection. Histology of spinal cord was examined by haematoxylline-eosin staining.

**Outcome measured :** Latency time toward thermal stimulus, paw thickness and Histology of spinal cord.

**Results :** The result showed that ginger oil administration significantly increased latency time of mice toward thermal stimulus compared to negative control. Whereas ginger oil administration could decrease inflammatory cell, vasodilatation and increase neuron forming of the spinal cord and brain histology compare to negative control.

**Conclusion :** The conclusion of this research was ginger oil had an antinociceptic effect by increased latency time toward thermal stimulus and recoved histology of spinal cord and brain from mice with inflammatory pain

**Keywords :** Inflammatory pain, CFA, Ginger oil, Spinal cord