

## ABSTRACT

### **Effect of Curcumin and Quercetin on MC4R and POMC mRNA Expression in CIPN-Induced Spinal Cord of Mice with Oxaliplatin**

Diah Ayu Wakita Trimanda

The purpose of this study was to analyze the effects of curcumin and quercetin on MC4R and POMC mRNA expression in the spinal cord in mice with the CIPN model induced by oxaliplatin. In this study 24 mice were used which were grouped into the normal group, the neuropathic pain group (oxaliplatin 3 mg/kgBB), the neuropathic pain group+curcumin 120 mg/kgBW, and the neuropathic pain group+quercetin 500 mg/kgBW. The study was conducted for 14 days, in the first week induced oxaliplatin and in the second week treated with curcumin and quercetin. Sacrifices were made on the 15th day and then the spinal cord samples were extracted to obtain total mRNA. mRNA is converted to cDNA using the RT kit system. The resulting cDNA was amplified using Polymerase Chain Reaction (PCR). PCR products were electrophorized in 2% agarose gel and visualized with Ethidium Bromide. Then placed under UV light to see the sample band. The band results are quantified using ImageJ software to obtain an average. Based on the results of the study the administration of curcumin 120 mg/kg BW and quercetin 500 mg/kg BW i.p did not differ significantly from mRNA MC4R and POMC in the spinal cord of mice with CIPN. From this study it was concluded that curcumin 120 mg/kgBW and quercetin 500 mg/kgBW i.p for seven days when the oxaliplatin-induced mice did not cause changes in MC4R and POMC in the spinal cord.

**Keywords** : CIPN, curcumin and quercetin, spinal cord, MC4R and POMC, PCR