**TÍTULO**

**ANTIDEPRESSIVE ACTION OF MYRTENOL AGAINST DEPRESSION INDUCED BY NEUROPATHIC PAIN IN RATS**

GISELI KARENINA TRAESEL, HELIANA BEATRIZ BARBOSA, SILVIA APARECIDA OESTERREICH, CÂNDIDA APARECIDA LEITE KASSUYA

UNIVERSIDADE FEDERAL DA GRANDE DOURADOS, UFGD, DOURADOS, MS, BRASIL

**RESUMO**

**Introduction**: Natural compounds extracted from plants are widely studied and tested by the pharmaceutical industry, seeking medical applications. Monoterpenes, such as (-)-myrtenol (MYR), are among the most investigated, since its chemical structure and biological effects. Studies showed that the MYR has sedative, anxiolytic and anti-inflammatory effects. In addition to this, MYR modifies the function of the GABA A receptor in Xenopus oocyte and embryonic human cells. However, research exploring the antidepressive actions is still needed.

**Objective**: this work aimed to verify the antidepressive action of (-)-myrtenol in spared nerve injury (SNI) model of neuropathic pain in rats.

**Materials and Methods**: male Wistar rats were subjected to surgery to induce neuropathic pain (SNI) in the terminal branches of the sciatic nerve - common peroneal and tibial - were sectioned, maintaining only the sural nerve intact. The animals were divided into a control group (received saline, gavage) and treated group (receiving MYR at a dose of 30 mg/kg, also gavage). Treatment was administered once daily for 15 consecutive days. An additional group of animals (sham group) received a sham surgery where the nerve was exposed but not manipulated. All animals were evaluated for depression by the forced swimming test in the 10th and 15th post-surgery.

**Results**: the SNI surgery induced depressive like behavior in animals. After repeated administration, MYR was able to decrease significantly the immobility time in the forced swimming test in animals subjected to SNI surgery. The effect was observed on the 10th and 15th days post-surgery.

**Discussion and Conclusion**: The results showed that the MYR when repeatedly administered orally, causes antidepressant effect in rats. These data, together with data obtained from the literature suggest that MYR presents itself as a potential drug acting on the central nervous system.

**References**:

