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Evaluation of the Lipid-lowering, Anti-Inflammatory and Antispasmodic Activities of *Melissa Officinalis*

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The aim of this work is the study of the biological properties of *Melissa officinalis*, a plant harvested in the region of Setif (eastern Algeria); it is known for its many pharmacological properties. The phytochemical study of the leaves revealed the presence in this plant of flavonoids, condensed tannins and triterpenes. Experimentation of lipid-lowering, anti-inflammatory and antispasmodic activities of the aqueous extract of the plant was conducted in mice and rats. Lipid-lowering activity was evaluated by induction of hyperlipidemia in rats on a lipogenic diet containing 10% sheep fat and 20% sunflower oil added to normal food as well as 3% ethanol added. water ad libitum. After 14 days of dieting, the hyperlipidemic rats received *M. officinalis* extract by gastric gavage at doses of 1g and 2g / kg for 28 days. The anti-inflammatory activity is evaluated according to the method of the reduction of the edema of the paw. The third technique is to study the antispasmodic activity evaluated by the Writhing test. The results of this work allowed us to affirm that the extract of *M. officinalis* has very good hypolipidemic and liver-protective properties, an anti-inflammatory activity whose percentage inhibition is 89.02% and an activity antispasmodic with a crampial inhibitory effect of 79.09%.

Keywords: *Melissa officinalis*; phytochemical screening; lipid-lowering activity; anti-inflammatory activity; antispasmodic activity.