

**THE EFFECT OF *Eurycoma longifolia* ROOT EXTRACT TOWARDS TESTICULAR WEIGHT AND THE TOTAL NUMBER OF LEYDIG CELLS OF RAT (*Rattus norvegicus*) EXPOSED WITH MONOSODIUM GLUTAMATE**

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**ABSTRACT**

This research was aimed to determine the effect of *Eurycoma longifolia* root extract towards testicular weight and the total number of *Leydig* cells of rat (*Rattus norvegicus*) exposed with *Monosodium Glutamate*. This research was conducted in October 2017 at the Animal Experiment Laboratorium of Faculty of Veterinary Medicine Airlangga University, and the histopathology preparations was at the pathology laboratory of Airlangga University. This study used 20 male rats with an average weight of 150 grams. The experiment was arranged in completely randomized design and divided equally into four groups. The P- was a control group had been given the drug solvent of *aquadest* for 30 days orally, the P+ groups were given MSG 4 g/kg BW for 30 days orally, while P1 and P2 groups were given *Eurycoma longifolia* root extract 600 mg/kg BW and 900 mg/kg BW and one hours later were given MSG 4 g/kg BW for 30 days orally. On the 31<sup>st</sup> day, the male rats were euthanized by cervical dislocation. The testes were weighed using an analytical scale of 0.1, while the *Leydig* cells could be observed by utilizing 400x microscope magnification. The result was analyzed with *Analysis of Variance* (ANOVA) and followed by *Duncan's Multiple Range Test* (DMRT). The research result demonstrated that the *Eurycoma longifolia* root extract addition could not increase the testicular weight after being exposed with MSG ( $p > 0,05$ ) but could increase the *Leydig* cells after being exposed with MSG ( $p < 0,05$ ).

**Keywords:** *Monosodium Glutamate*, *Eurycoma longifolia* root extract, Testicular weight, *Leydig* cells