

PENGARUH EKSTRAK ETANOL 70% DAUN *Justicia gendarussa* Burm. f. PADA
KADAR HORMON TESTOSTERON PLASMA PRIA FERTIL

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ABSTRACT

Indonesia has been known for its plants diversity with so many functions, one of them is for drug, specifically for anti-fertility. To increase male's role in Planning Family, effective and reversible contraceptive method is needed, and there have been so many studies to develop anti-fertility from plants. One of them is *Justicia gendarussa* Burm. f., that has been used as traditional anti-fertility in Irian Jaya, Indonesia. Then it's known that *Justicia gendarussa* Burm. f. contains flavonoid compounds that act as anti-fertility in male, by inhibiting hyaluronidase enzyme. One factor of fertility is measured by testosterone concentration, thereby this study is conducted, with main purpose to know effect of *Justicia gendarussa* Burm. f. on testosterone concentration.

Testosterone concentration measured by MODULAR ANALYTICS EVO instrument that using ECLIA (Electro Chemical luminescence Immunoassays) method, with volunteer's blood as sample. Three dosage were used in this phase II clinical study: 450,5 mg of extracts/capsule, 300,0 mg of extracts/capsule, and placebo for 144 days (2 times of spermatogenesis cycle). This study used testosterone concentration that obtained in 0, 36th, 72nd, and 144th day, then analyzed statistically to know if there are any significant effects both for treatment day factor and dosage factor.

From the results, it's shown that there weren't any significant effects both for treatment day factor and dosage factor to testosterone concentration (observed from p-values that greater than α , using $\alpha = 0,05$) using Two Way Anova test. Then as post hoc test, Tukey-HSD test was used to see any significant interaction effect between dosages used and each day of treatment. The results showed that there weren't any significant interaction effect from dosages used to testosterone concentration, so does from each day of treatment factor, because there aren't any significant mean difference between each factors at 0,05 level.

It should be expected in the future, there will be further study to know if gendarussin A in *Justicia gendarussa* Burm. f. affects another glands in male reproduction system, e.g. Cowper gland.

Keywords: *Justicia gendarussa* Burm. f., testosterone concentration, fertile males, ECLIA