

ABSTRACT

THE EFFECTS OF CAPSULE EXTRACT ETANOL 70% LEAF *Justicia gendarussa* Burm.f ON HIALURONIDASE ACTIVITIES IN SPERM'S PRODUCTIVE MALE

Justicia gendarussa Burm.f. contains gendarusin A a flavonoid that has antifertility action, that is preventing spermatozoa penetrations by slowing down hyaluronidase enzyme activity of spermatozoa. Hyaluronidase has a role to the penetration of cumulus ooforus by hydrolyzing hyaluronic acid in the fertilization process. If hyaluronidase activity is inhibited, there will be decrease activity of cumulus ooforus dispersion; Finally, there is no penetration in the cumulus ooforus. The goal of this research is to know the effect of capsule extract etanol 70% leaf *Justicia gendarussa* Burm.f. on hialuronidase activities in sperm human. The methode used was microplate assay. Hyaluronidase activities can be detected from residues of hyaluronic acid that were not hydrolyzed by hyaluronidase and sedimented by cetylpyridinium chloride that gave the absorbance in the λ 595 nm with microplate reader. The study showed decrease spermatozoa hyaluronidase activity of sperm's productive male after given capsule extract etanol 70% leaf *Justicia gendarussa* Burm.f. The spermatozoa hyaluronidase katalitic activity of the sperm's productive male given capsule is $(1,53.10^{-6} \pm 9.17.10^{-7})$ Unit/million spermatozoa, 36th days is $(1,40.10^{-6} \pm 6.97.10^{-7})$ Unit/million spermatozoa, 72th days is $(1,42.10^{-6} \pm 5.57.10^{-7})$ Unit/million spermatozoa and reversibility is $(1,59.10^{-6} \pm 6.31.10^{-7})$ Unit/million spermatozoa and the second dose 300.5 mg/70 kgBB before given capsule is $(1,87.10^{-6} \pm 1.31.10^{-7})$ Unit/million spermatozoa, 36th days is $(1,64.10^{-6} \pm 7.11.10^{-7})$ Unit/million spermatozoa, 72th days is $(1,70.10^{-6} \pm 7.51.10^{-7})$ Unit/million spermatozoa, reversibility is $(2,14.10^{-6} \pm 1.32.10^{-7})$ Unit/million spermatozoa. The result above showed decrease hyaluronidase activity of sperm's productive male after given capsule extract etanol 70% leaf *Justicia gendarussa* Burm.f from placebo.

Key words : *Justicia gendarussa* Burm. f , hyaluronidase, sperm's productive male, microplate methods