# ABSTRACT

Yuida Listiyaningrum. 24020120130061. Histomorphometry and Histological Structure of the Testes of White Rats (*Rattus norvegicus*) Diabetesi who were given soaked water from Sungkai plants (*Albertisia papuana* Becc). Under the guidance of Kasiyati and Erma Prihastanti.

Diabetes mellitus (DM) is a metabolic disease caused by high blood sugar that exceeds normal limits. The use of medicinal plants is one of the traditional alternative treatments by using medicinal plants to lower blood sugar levels or be anti-diabetic. The sungkai plant (*Albertisia papuana* Becc.) is a medicinal plant that has anti-diabetic properties, so the Dayak Ngaju tribe, Kalimantan, is often used as a diabetes medicine because it has the potential to reduce high blood sugar levels. This study aims to analyze the histomorphometry and histological structure of the testes of white rats with diabetes mellitus that were given water soaked in the roots, stems and leaves of the sungkai plant. This study used 25 white mice which were divided into 5 treatment groups and 3 replications. This research design used a Completely Randomized Design (CRD). White rats (*Rattus norvegicus*) were acclimated for 14 days and then treated for 30 days. The variables of this study consisted of relative testicular weight, gonadosomatic index, seminiferous tubule diameter, lumen diameter, tunica albuginea thickness, and spermatogenesis level in white rats (*Rattus norvegicus*). The data was tested for normality and homogeneity, showing normal and homogeneous results, then continued with the Anova test with a confidence level of 95% and further tests using the Duncan test. The results obtained show that sungkai plants have an influence on the testicular histomorphometry of DM rats after treatment. The conclusion of this research was that administration of sungkai water soaked could improve the histological structure of testicles damaged by DM.

Key word : *lumen, spermatogenesis, tubulus seminiferus.*