

ABSTRACT

Nur'aini, Farida Dewi. 2014. **The Effect of Mulberry Leaves (*Morus alba* L.) Infuse on Histology Preview and Testis Weight of White Rat (*Rattus norvegicus*) with Chronic Diabetes Mellitus**. Thesis. Department of Biology, Faculty of Science and Technology, Maulana Malik Ibrahim State Islamic University of Malang. Supervisor of Biology: Dr. drh. Bayyinatul Muchtaromah, M. Si. Supervisor of Religion: Mujahideen Ahmad, M.Sc

Keywords: Mulberry Leaves (*Morus alba* L.), Weight and Histology Preview, Testis, Chronic Diabetes Mellitus, White Rat (*Rattus norvegicus*).

Leaves of mulberry (*Morus alba* L.) is one of the traditional plants that contain compounds *antihyperglycemic* and *antioxidant*. These compounds are known to lower high blood glucose levels and improve organ damage due to free radicals due to an increase in hyperglycemic conditions. This study aims to determine the effect of infusion of mulberry leaves (*Morus alba* L.) on testicular weight and testicular histology white rat (*Rattus norvegicus*) Chronic Diabetes Mellitus.

This research was an experimental study using completely randomized design (CRD) with 6 treatments and 4 replications. The treatment used was K (+) (positive control), K (-) (negative control), P1 (400 mg / kg), P2 (600 mg / kg), P3 (800 mg / kg BW) and P4 (1000 mg / kg BW). Animals used were male Wistar strain rats tails were 24 ± 1 months old with an average weight of 70-100 grams. Research data include the number of germ cells (spermatogonia, primary spermatocytes, secondary spermatocytes, spermatids and spermatozoa), Sertoli cells, the diameter of the seminiferous tubules, and testes weight. Data were analyzed with One Way ANOVA, if there is a very real difference then followed by further test Duncan α 1%.

The results showed that the infusion of leaves of mulberry (*Morus alba* L.) affected on increasing the number of germinal cells, Sertoli cells, the diameter of the seminiferous tubules, and testis weight of white rat suffering chronic diabetes mellitus. The optimum infusion dose of mulberry leaves (*Morus alba* L.) in increases the number of germ cells, Sertoli cells, the diameter of the seminiferous tubules, and testis weight was P4 optimal dose (1000 mg / kg BW).