

ABSTRACT

Saifuddin, Arif. , 2014. **The Effect of Mulberry Leaves Infusion (*Morus alba* L.) on the Levels of Superoxide Dismutase (SOD) of Brain and Memory Ability White Rats (*Rattus norvegicus*) Model of Chronic Diabetes.** Thesis Department of Biological Science and Technology of the State Islamic University (UIN) Malang. Supervisor: Biology Dr. Drh. Bayyinatul M, M.Si, Religion Ach. Nashichuddin, MA

Keywords: *Morus alba* L, SOD, Memory, Brain

The excessive of free radicals causing oxidative stress. The high oxidative stress, causing an increase of free radicals in the body and decrease enzymatic activity and capacities memory. Activity of free radicals that can only be inhibited by the presence of antioxidants. One of the plants that have been shown to act as antioxidants are the leaves of mulberry (*Morus alba* L.). This study aims to determine the effect of mulberry leaves infusion (*Morus alba* L.) on the levels of antioxidants brain and memory ability of white rats (*Rattus norvegicus*) model of chronic diabetes.

This study used a completely randomized design (CRD) with six treatments and four replications. Experimental animals used in this study is a white rat (*Rattus norvegicus*). This study aims to determine the effect of mulberry leaves infusion (*Morus alba* L.) on the levels of SOD and memory ability of white rats (*Rattus norvegicus*) model of diabetes. This study is divided into six (6) groups consisting of a negative control (K-) positive control (diabetic rats) and rats groups fed by mulberry leaves infusion at a dose of 400 mg / kg (P1), 600 mg / kg (P2), 800 mg / kg (P3), and 1000 mg / kg (P4). On levels of superoxide dismutase (SOD) of the brain and memory skills of white rat (*Rattus norvegicus*).

Based on the results of the analysis showed that mulberry leaves infusion increases levels of SOD in the rat brain, the highest SOD indicated by P2 (600 mg / kg). The ability of the highest short-term memory (RT1) shown in P4 (1000 mg / kg), whereas (RT 2) the ability of the highest long-term memory shown in P3 dose (800 mg / kg).