

ABSTRACT

EFEK PEMBERIAN EKSTRAK TERIPANG EMAS (*Stichopus hermanii*)

TERHADAP KADAR GLUKOSA OTOT MODEL TIKUS DIABETES

MELLITUS

Diabetes mellitus is a metabolic disorder, which in a long term can cause various serious complications such as cardiovascular disease and muscle dysfunction. Preventive therapy has been widely used, for example oral diabetes and insulin therapy, while people in Malaysia and China have used natural ingredients such as golden sea cucumber for traditional treatments for diabetes mellitus. But the effect of golden sea cucumber on diabetes has not been scientifically proven. The purpose of this study is to examine how the effect of golden sea cucumber (*Stichopus hermanii*) extract on muscle glucose levels by using experimental animals. This study used experimental animals of *Mus musculus* mice which are divided into 3 groups with the number of 9 mice in each group. The K1 group was a negative control group which was only given aquadest, the K2 group was the treatment group which was given extract of golden sea cucumber and the K3 group was a positive control group that was given standard oral diabetes drug namely metformin. K1, K2 and K3 were treated for 7 days according to the type of treatment. After that, the gastrocnemius of the mice were taken to be measured using a glucometer. The data was analyzed using one way anova and brown forsythe. Brown forsthe test results showed (p) = 0.001 which means that muscle glucose has different meaning in each group. Comparison of K1 treatment groups with K2 and K1 with K3 showed significant results. While the comparison of the K2 treatment group given the extract and K3 given metformin showed the value (p) = 0.013 which showed a different meaning. From the data analysis, it can be concluded that the administration of golden sea cucumber extract can increase glucose levels in skeletal muscle of diabetic mice.

Keywords: glucose, diabetes mellitus, golden sea cucumber, mice.