MELATONIN AS HYPERGLYCEMIA PREVENTION IN EXPERIMENTAL DIABETES MELLITUS TYPE 1 RATS
Teresia Ayu Yuliamarini Banjarnahor

ABSTRACT

The aim of this research is to study the effect of melatonin as hyperglycemia prevention in experimental diabetes mellitus type 1 rats. Thirty rats were divided into five groups P0, P1, P2, P3, and P4. Group P0 as a negative control of diabetes and group P1 as a positive control of diabetes which rats were injected with alloxan 150 mg/kg b.w. Group P2, P3, and P4 were receive melatonin with each doses are 5 mg/kg b.w, 10 mg/kg b.w, and 15 mg/kg b.w respectively for seven days and then were injected with alloxan 150 mg/kg b.w as a hyperglycemia induction. The blood samples were taken after four days from alloxan injection to measured the level of blood glucose. The data was collected and analyzed by using ANAVA and Duncan’s Multiple Range Test methods and was processed by using SPSS computer software program.

The result of the experiment showed that there was a significant difference in blood glucose varian analysis and from the result of Duncan’s Multiple Range Test, the highest blood glucose was P1 and the lowest blood glucose was P0, P2, P3, and P4. It showed that melatonin can use as hyperglycemia prevention in diabetes mellitus type 1 rats.

Keywords : melatonin, alloxan, hyperglycemia.