

***ABSTRACT***

**The Effect of Red Guava Juice (*Psidium guajava* linn)  
On Blood Glucose Levels And Insulin Resistance In Male Wistar Rats  
(*Rattus Novergicus*) Prediabetes**

Pre-diabetes is a condition that blood glucose levels are higher than normal but not high enough to say diabetes and it can develop into diabetes mellitus (DM) type 2, two conditions associated with prediabetes is impaired glucose tolerance (GTG) or fasting blood glucose disturbed (GDPT). The purpose of this study was to determine the effect of red guava juice (*Psidium guajava* L) which was a source of antioxidants on blood glucose levels and insulin resistance in rats wistar strain. This research is true experimental design of randomized pre-post test with control group design, in which the experimental group were divided into 5 groups: control group negative given only the standard feed and drinking water ad libitum, positive control induced with dexamethasone and 3 groups treatment by the addition of red guava juice at a dose of 3.6 g / head / day, 7.2 g / head / day and 10.8 g / head / day given orally. The study was conducted over a period of 3 weeks. Blood glucose levels taken during pre-treatment for the control and treatment groups, whereas post treatment for all three treatment groups alone and blood insulin levels for all groups, and the data collected after it was processed using Manova statistical test with a confidence level of 95%. The result of this research there the effect of the treatment groups on levels of fasting blood glucose and HOMA-IR index with p value <0.05. Conclusions red guava juice can lower fasting blood glucose levels and HOMA-IR index in prediabetic mice induced with dexamethasone.

**Keywords : Glucose fasting, Insulin Resistance, Guava Juice, Rats**