

## ABSTRACT

Riza Dwi Aprilia. B4109412. Department of Health, Clinical Nutrition Program, State Polytechnic Jember. Giving Aloe Vera Against Blood Glucose Levels Decrease in Mice Hyperglycemia. Supervising Commission dr. Adhiningsih Yulianti.

Patterns and lifestyles of the people of almost instantaneous impact on blood glucose levels or hyperglycemia is an early stage of the disease DM. Aloe vera contains alprogen chromium compounds and substances that can lower blood glucose levels by inhibiting the absorption of glucose in the intestine and prevent the entry of  $\text{Ca}^{2+}$  into the cell, whereas  $\text{Ca}^{2+}$  is needed by the cell to the occurrence of exocytosis. In the normal state of  $\text{Ca}^{2+}$  from the intestinal lumen into the intestinal cells and resulted in exocytosis Sodium Glucose Transporter 1 (SGLT1), which serves to transport glucose in the intestinal lumen to the blood capillaries into the intestinal absorptive cells.

This study uses experimental (True Experimental) with study design pre and post test control group design with a control group using mice as experimental animals. Sample is male mice (*Mus musculus* L) were grouped into 4 to 6 replications ie 1 control group and 3 treatment groups (0.1 ml/20grBB/hari dose, dose ml/20grBB/hari 0.2, and 0.3 ml / 20grBB/hari). There are three variables in this study, that of aloe vera juice (independent variables), Blood glucose levels in mice during experiments (dependent variable), and which can be controlled in genetic, age, gender, body weight and feed during treatment and that can not be controlled pancreatic disease, hormonal and stress (outer variable).

The results showed an average blood glucose levels after treatment in the control treatment (384.3333 mg / dl), P1 provision aloe vera juice (283.8333 mg / dl), P2 provision aloe vera juice (315.1667 mg / dl) , P3 provision of aloe vera juice (348 mg / dl). Further test HSD (Honestly Significant Evidence) on blood glucose levels showed significantly different P1 P2 and P3 groups. Results showed that aloe vera juice at a dose of 0.1 ml/20grBB/hari more effective in lowering blood glucose levels in hyperglycemic mice experimental animals.

Keywords: alloxan, blood glucose levels during hyperglycemic mice.