THE EFFECT OF SHALLOT (Allium Ascalonicum L.) EXTRACT IN ENDOCRINE CELLS IN THE ISLETS OF LANGERHANS PANCREATIC TISSUE OF HYPERGLYCEMIC RATS (Rattus norvegicus).

ABSTRACT
The aim of this research was to evaluate the effect of Shallot (Allium ascalonicum L.) extract on the number of endocrine cells in the islets of Langerhans in pancreatic tissue of hyperglycemic rats. Shallot (Allium ascalonicum L.) contains quercetin considered has a potential as hypoglycemic agent through its inhibition acting to alpha amylase enzyme which play a role in carbohydrate digestion. This study was experimental study, using male rats induced hyperglycemic with alloxan 120 mg/kg BW (IP) for a period of 4 days. Samples consist of twenty rats were divided into five groups, group K+ as control, group P0 (administred of metformin 45 mg/kgBw), group P1 (administred of shallot extract 250 mg/kgBw), group P2 (administered of shallot extract 500 mg/kgBw) and P3 (administered of shallot extract 750 mg/kgBw) daily for two weeks period. The pancreas tissues were obtained at the end of the treatment and processed using paraffin embedding methods. The tissues were stained with Hematoxillin-Eosin for morphological study and analysis of the number of pancreatic endocrine cells, The data have been described in table form, analyzed with One Way Anova for the normality of the data, furthermore analyzed with Turkey test. This data analysis using SPSS for windows 21. The number of pancreatic endocrine cells of group P1 (98,279±4,485), group P2 (132,416±7,738), group P3 (181,708±25,462), were significantly higher (p<0.05) than that of positive control group (79,577±7,959).This study showed that Shallot (Allium ascalonicum L.) extract treatment inhibit the rate of pancreatic endocrine cells damage.

Keyword: Allium ascalonicum, Alloxan, hyperglycemia, Endocrine cells, Rats.