

**EFFECT OF SAMBILOTO LEAF EXTRACT (*Andrographis paniculata*
Ness) TO HISTOPATHOLOGICAL PANCREATIC LANGERHANS
ISLET CELLS ON RATS (*Rattus norvegicus*)
WITH CYSTIC OVARY MODEL**

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ABSTRACT

Polycystic Ovary Syndrome (PCOS) or cystic ovary is a disease of endocrine system, which is follicles on the surface were never ovulated and androgen levels in the body increased. Sambiloto leaf extract (*Andrographis paniculata* Ness) can stimulate the release of insulin and increase the effectiveness of insulin receptors so that no insulin resistance. The purpose of this research was to know the influence of sambiloto on decreasing the number of cells in pancreatic islets of Langerhans in rat model of cystic ovaries with insulin resistance. The rats were grouped into five groups, that are a negative control, positive control with testosterone injection 1 mg/kgBW during 28 days, P1 with testosterone injection 1 mg/kgBW during 28 days and extract of sambiloto with the dose 18 mg/kgBW, P2 36 mg / kgBW, P3 72 mg / kgBW respectively during 21 days. The results of this research were analyzed using ANOVA and Duncan test. The results showed that the number of Langerhans islet cells decrease in compliance with increasing dose of sambiloto leaf extract. The conclusion of this research is sambiloto leaf extract can decrease the number of cells in the pancreatic islets of Langerhans on rats model of cystic ovary through improvement of insulin sensibility.

Key words : *Andrographis paniculata* Ness, PCOS, insulin resistance, islet of Langerhans