

ISSN: 2277- 4998

International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS)

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**ANTIDIABETIC ACTIVITY OF ETHANOL EXTRACT OF KABAU SEEDS****(*Archidendron bubalinum* (JACK.) I.C. NIELSEN) AS ANTI-DIABETIC****SUTRISNO E*, CAROLINA CP AND SUSILAWATI E**

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Received 28th Oct. 2019; Revised 20th Nov. 2019; Accepted 29th Dec. 2019; Available online 1st May 2020

<https://doi.org/10.31032/IJBPAS/2020/9.5.5041>

ABSTRACT

Empirically, Kabau seeds (*Archidendron bubalinum* (Jack.) I.C.Nielsen) are used by Sumatran people as antidiabetic drugs. This study aims to investigate the antidiabetic activity of ethanol extract of Kabau seeds. The methods used in this study were insulin resistance and insulin deficiency by using Swiss Webster mice, and α -glucosidase enzyme inhibition. The insulin resistance method was carried out preventively by inducing Lipofundin® 30 mL/Kg body weight (bw) and fructose 0.52g /Kg bw for 28 days. The insulin deficiency mice was induced by alloxan monohydrate at dose 55-60 mg / Kg bw and blood glucose levels were measured on days 0, 3, 6, 9, 12, and 15. The animals were divided into 6 groups: negative control, positive control, comparison group, Ethanol Extract of Kabau Seeds (EEKS) 95 mg/Kg bw, EEKS 190 mg/Kg bw, and EEKS 380 mg/Kg bw. Inhibition of the α -glucosidase enzyme was carried out at extract concentrations of 50, 100, 150, 200, 250, 300, 350, 400, 450, and 500 ppm, and the absorbance was measured by using a micro-reader at a wavelength of 425 nm. In the insulin resistant method, the values of constant insulin tolerance test (CITT) for negative control, positive control, metformin 65 mg/Kg bw, EEKS 95 mg/Kg bw, EEKS 190 mg/Kg bw, and EEKS 380 mg/Kg bw obtained were 1.58, 0.45, 1.89, 1.75, 1.82, and 1.62, respectively. In the insulin deficiency method, all doses could reduce blood glucose levels on the 6th day. In conclusion, the results of this study show that ethanol extract of Kabau seeds increases insulin sensitivity and insulin secretion at best dose of 190 mg/Kg bw.

Keywords: Kabau Seeds, *Archidendron bubalinum* (Jack.) I.C.Nielsen, diabetes mellitus