

The Effect of Porang Flour Substitution Biscuits on Fasting Blood Glucose Levels in White Rats (*Rattus norvegicus*) Diabetes Mellitu

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ABSTRACT

*Diabetes mellitus is a metabolic disease characterized by an increase in blood glucose levels that exceed normal (Perkeni, 2015). One of the medical therapies is by setting a diet by eating high-fiber foods. Porang tubers are an alternative food ingredient that has a high fiber content. One of the processing of porang tubers is to process them into flour and become a substitute for biscuits. The purpose of this study was to determine the effect of giving porang flour substitute biscuits on reducing fasting blood glucose in white rats (*Rattus norvegicus*) with diabetes mellitus. The type of research used is experimental (True Experimental) with a Pretest-Posttest Control Group Design which was conducted randomly. This study used 24 rats aged 2-3 months weighing 180-250 grams which were divided into 3 groups; negative control (K-) was only given 20 gram ratbio standard feed, positive control (K+) was given Streptozotocin induction and only given 20 gram ratbio standard feed and treatment (P) treatment was given Streptozotocin induction and given intervention in the form of porang flour substitute biscuits 2.3 grams and standard feed ratbio 20 grams for 5 weeks. The results showed that there were differences in fasting blood glucose levels between the control group and the pretest and posttest treatments ($p=0.01$). So it can be concluded that there is an effect of giving porang flour substitute biscuits on fasting blood glucose levels of male Wistar rats with diabetes mellitus.*

Keywords: *Porang flour substitute biscuits, fasting blood glucose levels, diabetes mellitus*