

**THE EFFECT OF GIVING PORANG FLOUR SUBSTITUTE Biscuits ON
BLOOD GLUCOSE LEVELS WHEN WHITE RATS (*Rattus norvegicus*)
DIABETES MELLITUS**

Dwike Widiyowati

Clinical Nutrition Study Program

Department of Health

ABSTRACT

*Diabetes mellitus is a chronic metabolic disease characterized by the occurrence of blood glucose levels exceeding normal where fasting glucose levels are 126 mg/dL and blood glucose levels are 200 mg/dL. Pharmacological therapy of diabetes mellitus is aimed at controlling blood glucose levels. One therapy that can be done is the consumption of high-fiber foods that can have an effect on reducing blood glucose in people with diabetes mellitus. One of the high-fiber foods is biscuits with 40% porang flour substitution which contains 4.70% fiber. The purpose of this study was to determine the effect of giving porang flour substitute biscuits on blood sugar levels when white rats (*Rattus norvegicus*) had diabetes mellitus. This study used 18 rats aged 2-3 months weighing 150-250 grams which were divided into 3 groups, namely negative control, positive control, and treatment. The negative control group was healthy rats that were given standard feed of 20 grams. The positive control group was rats with diabetes mellitus and were given standard feed of 20 grams. While the treatment group was rats with diabetes mellitus who were fed 2.3 grams of biscuits substituted with porang flour and 18 grams of standard feed. The results showed that there was no difference in blood glucose levels between the negative control group ($p=0.390$) and the positive control group ($p=0.581$), but there were differences in blood glucose levels during the treatment group ($p=0.000$). So it can be concluded that there is an effect of giving porang flour substitution biscuits on blood glucose levels when rats have diabetes mellitus.*

Key words : Porang flour substitution biscuits, Current blood glucose levels, Diabetes mellitus.