

ANTIHYPERGLYCEMIC ACTIVITY OF YACONA® PRODUCT IN MALE WISTAR RATS INDUCED BY STREPTOZOTOCIN

ABSTRACT

Diabetes mellitus (DM) is a metabolic disorder caused by a lack of insulin or the body's inability to use insulin. Diabetes mellitus is a chronic disease, where long-term treatment can cause large side effects. YACONA® is an alternative DM therapy based on a combination of herbal plants, namely yakon leaf (*Smallanthus sonchifolius*), bay leaf (*Eugenia polyantha*), and bitter herbs (*Andrographis paniculata* Nees, *Acanthaceae*) which are known to have lower blood glucose levels (BGL). This study aimed to determine the effectiveness of reducing blood glucose levels by administering YACONA® products to male Wistar rats induced by streptozotocin (STZ). A total of 42 male Wistar rats were divided into 6 groups, namely the normal control group, control (+), control (-), and 3 treatment groups. Single dose STZ induction of 8mg / 200g mice was given to all groups, except in the normal group. The control group (+) was given 0.09mg / 200g of glibenclamide rats, while 3 treatment groups were induced YACONA® products with different dosages of 18mg / 200g of rats, 36mg / 200g of rats and 54mg / 200g of rats. Fasting blood glucose levels (FBGL) measurements were carried out on days 0, 5, 16 and 28 by drawing rat blood through orbital veins. The results showed that male Wistar rats experienced a decrease in FBGL after being given YACONA® with a percentage decrease in treatment I 81,61%, treatment II 90,30% and treatment III 106,09%. Based on the results of statistical analysis, changes in KGDP of the three treatment groups did not differ significantly. So it can be concluded, the administration of YACONA® at a dose of 18mg / 200gr, 36mg / 200g and 54mg / 200gr mice have the same activity in reducing BGL.

Keywords: diabetes mellitus, YACONA®, BGL, streptozotocin