

ABSTRACT

Puspitasari, Yuan Laura. 2016. **Effect of Candlenut (*Aleurites moluccana*) Leaves Extract Against Pancreatic MDA levels of Rat (*Rattus norvegicus*) Wistar Model of Type II Diabetes**. Final Assignment, Medical Program, Faculty of Medicine. Supervisors: (1) dr. Dian Nugrahenny, M.Biomed (2) Kana Mardiyah, S.Si., M.Biomed.

Previous studies have shown that extract of candlenut (*Aleurites moluccana*) leaves contains flavonoids which consist of Swertisin and 2"-O-Rhamnosylswertisin that are expected to be active ingredients that have a lot of functions in health including as antidiabetic. MDA (Malondialdehyde) is a marker of lipid peroxides that has highly destructive power against the body cell, which is increasing free radicals and oxidative stress in patient with DM (Diabetes Mellitus) and causes the increasing production of MDA. Rat (*Rattus norvegicus*) wistar is used in this research since its demonstrations of anatomy and physiology represents human. This study aimed to attest the effect of giving candlenut leaves extract against pancreatic MDA level in rat model of type II diabetes mellitus. This study was carried out experimentally by in vivo laboratoric using Randomized Post test Only Control Group design as the design. This study design was not conducted the pre-test. The samples were divided into 5 groups that were one negative control group, one positive control group, as well as another 3 groups with different doses of candlenut leaves extract (100, 200, 400 mg/kgBW/ day orally). The measured variable was pancreatic MDA levels of rat using TBA method. The results showed significant differences in 5 groups (ANOVA, $p=0.011$). It can be concluded that the groups of normal, DM, and the dosage of 200mg / kgBW were not significantly different from each other. The relation between two variables was too weak and not significant (Pearson, $p=0.648$; correlation coefficient = 0.124). The conclusion of this study is the diversification of candlenut leaves extract dose can affect the pancreatic MDA levels yet not significant. The result of this study is that candlenut leaves extract can lower the levels of pancreatic MDA at the dose of 200mg/kgBW.

Keywords: candlenut leaves extract, swertisin, diabetes melitus, pancreatic MDA