EFFECTS OF ETHANOL EXTRACT OF STINK BEAN (Parkia speciosa Hassk.) ON THE URIC ACID LEVELS AND THE HISTOPATHOLOGICAL FEATURES OF RAT’S (Rattus norvegicus) HEART

Justin Hanura Al Farizi

ABSTRACT

The aim of this research was to discover the effect of ethanol extract of stink bean (Parkia speciosa Hassk.) on the uric acid levels and the histopathological features of rat (Rattus norvegicus) heart. This research used twenty male white rats aged 6-7 months with a weight between 150-180 grams. This research consisted of four groups with each different treatment. Control group was the control treatment, T1, T2, and T3, were given with ethanol extract of stink bean with each dose of 400 mg/kgBW, 600 mg/kgBW, and 900 mg/kgBW. Treatments had been given per oral for 28 days, once a day. At the end of the treatment period, execution was carried out, then the histopathological examination was performed. Microscopic observation on the severity of necrosis of the heart cell showed that the control group has not significantly difference with T1. Meanwhile Control and T1 has significantly difference with T2, and T3. In additional, the uric acid levels were (C) 1.046±0.17 mg/dl, (T1) 1.43±0.65 mg/dl, (T2) 2.19±0.43 mg/dl and (T3) 2.39±0.42 mg/dl. It shows that the higher the dose of uric acid the higher the damage to the heart. The damage in the tissue of the heart was caused by the side product of uric acid metabolism, reactive oxygen species. Reactive oxygen species have been implicated in cell damage and necrosis due to their direct oxidizing effects.

Keyword: stink bean extract, uric acid level, heart histopathology, toxicity.