Subchronic Toxicity Test of Ethanol Extract of Merdeka Leaves (Chromolaena Odorata L.) On SGOT, SGPT, and Histopathology of Liver and Kidney in Male Rats

Reza Pertiwi*, Afra Wafiqah Azhar, Dwi Dominica, Sal Prima Yudha S., Reza Rahmawati, Yona Harianti Putri

Faculty of Mathematics and Natural Sciences, Bengkulu University, Bengkulu, Indonesia

Email address:

rpertiwi@unib.ac.id (Reza Pertiwi)

*Corresponding author

Abstract

Merdeka plants are weed plants that have benefits as herbal remedies such as gastroprotectors, antibacterial, lowering blood glucose, and healing wounds. To be widely distributed to the community, the herbal medicine must be tested for safety through a toxicity test. This study aims to determine the effect of administration of ethanol extract of merdeka leaves (*Chromolaena odorata* L.) on liver function, namely the levels of SGOT (*Serum Glutamic Oxaloacetic Transaminase*) and SGPT (*Serum Glutamic Pyruvate Transaminase*) of male white rats (*Rattus norvegicus*). This study is a total of 25 male white rats (*R. norvegicus*) of the Wistar strain were divided into 5 groups consisting of group 1 (normal group of rats without treatment), group 2 (control group given Na CMC 0.5%), group 3 (ethanol extract of merdeka plant leaves with a dose of 150 mg/KgBB), group IV (ethanol extract of merdeka plant leaves with a dose of 300 mg/KgBB), and group V (ethanol extract of merdeka plant leaves with a dose of 600 mg/KgBB). The treatment was carried out for 28 days, and on the 29th day the mice were dissected and blood was drawn through the aorta of the rat heart. Liver and kidney organs are taken for histopathological preparations. The test results showed that the ethanol extract of Merdeka leaves at a dose of 600 mg/KgBB had a significant difference with the normal group and the control group on liver function, namely the SGOT and SGPT levels of rats with a significance value ($p<0.05$). It can be concluded that the administration of Merdeka leaf ethanol extract can affect the liver and kidney.

Keywords

Chromolaena Odorata, Toxicity Test, SGOT, SGPT