

Effects of *Centella asiatica* extract and powder on hydrogen peroxide-treated Sprague-Dawley rats

ABSTRACT

A study was conducted to investigate the effect of *Centella asiatica* extract and powder on dietary intake, body weight, organ weights and blood lipid peroxidation of hydrogen peroxide (H₂O₂)-treated male Sprague-Dawley rats. The experimental rats were fed with 0.3% (w/w) *C. asiatica* extract, 1.5% (w/w) *C. asiatica* powder, 5.0% (w/w) *C. asiatica* powder and 0.3% (w/w) α -tocopherol for 6 weeks. To induce oxidative stress, the rats were given drinking water spiked with 0.03% (v/v) H₂O₂. The amount of dietary intake, organ and body weight, and malonaldehyde (MDA) level throughout the study were monitored. Histopathological examination of selected organs was done at the end of the study. The results showed that MDA level was significantly ($p < 0.05$) higher in the normal rats compared to treated rats. Dietary supplementation of *C. asiatica* (extract and powder) and α -tocopherol significantly ($p < 0.05$) reduced lipid peroxidation in the experimental rats. However, there were no significant differences in dietary intake and histopathology observations of the organs of the rats.

Keyword: *Centella asiatica*; Lipid peroxidation; Malonaldehyde; Hydrogen peroxide; Sprague-Dawley rats