

## Modulation of lipid metabolism by *Centella asiatica* in oxidative stress rats.

### ABSTRACT

A study was carried out to investigate the effects of *Centella asiatica* leaf on lipid metabolism of oxidative stress rats. The rats were fed 0.1% hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) with either 0.3% (w/w) *C. asiatica* extract, 5% *C. asiatica* powder (w/w), or 0.3% (w/w)  $\alpha$ -tocopherol for 25 wk. Results of the study showed that *C. asiatica* powder significantly ( $P < 0.05$ ) lowered serum low-density lipoprotein compared to that of control rats (rats fed H<sub>2</sub>O<sub>2</sub> only). At the end of the study *C. asiatica*-fed rats were also found to have significantly ( $P < 0.05$ ) higher high-density lipoprotein and lower triglyceride level compared to rats fed only normal diet. However, cholesterol level of rats fed both *C. asiatica* extract and powder was found to be significantly ( $P < 0.05$ ) higher compared to that of control rats. It was interesting to note that consumption of *C. asiatica* significantly decreased body and liver weights of the rats. Histological examinations revealed no obvious changes in all rats studied. Quantitative analysis of *C. asiatica* leaf revealed high concentration of total phenolic compounds, in particular, catechin, quercetin, and rutin.

**Keyword:** Antioxidants; *Centella asiatica*; Cholesterol, Flavonoid; HDL; LDL; Oxidative stress; Triacylglycerol.