

## Comparative Therapeutic Effect of *Acalypha indica* Linn. Extract and Gemfibrozil on High Fructose and Cholesterol Diet Induced Pancreas Steatosis in Sprague-Dawley Mice

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**Abstract :** Sedentary lifestyle and imbalance consumption pattern has made metabolic syndrome as the global time bomb phenomenon in the world. The increasing tendency of people in consuming high amount of fructose and cholesterol food has worsened this issue in the society. Pancreas steatosis become one of the most comorbid when early diagnosis and prompt treatment has not been applied on hyperglycemic and hyperlipidemic condition in metabolic syndrome patient. Gemfibrozil become the drug of choice to prevent this issue, yet the efficacy of this regiment was still questionable. *Acalypha indica* Linn. is the herb that has protective effect on hyperlipidemic and hyperglycemic condition. This study was aimed to compare therapeutic effect of gemfibrozil (G) and *Acalypha indica* Linn. (AI) on high fructose and cholesterol diet-induced pancreas steatosis in Sprague-Dawley mice. The post induction mice were divided into four groups: control, gemfibrozil, AI extract, and G+AI combination regiment. Each group received four weeks intervention. The result of statistical analysis using the One-Way ANOVA test and Tukey Post Hoc test showed significant decrease in pancreatic steatosis between the control group and administered *Acalypha indica* group ( $p = 0.004$ , 95% CI: 0.170-0.959) and the group administered with a combination of Gemfibrozil-*Acalypha indica* ( $p = 0.023$ , 95% CI: 0.537-0.813). The protective effect of *Acalypha indica* Linn. shows that this plant has the potential as therapeutic option in overcoming the condition of pancreas steatosis in metabolic syndrome.

**Keywords :** *Acalypha Indica* Linn., Cholesterol, Fructose, Gemfibrozil, Pancreas Steatosis

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