

P20: HEPATOPROTECTIVE EFFECT OF *THUNBERGIA LAURIFOLIA* IN PRIMARY CULTURE OF RAT HEPATOCYTES TREATED WITH ETHANOL

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ABSTRACT

Thunbergia laurifolia Linn is known in Thai as "Rang Jued". It has been commonly used as antipyretic and antidote in Thai traditional medicine for many years. Treatment of alcoholism is also claimed using aqueous extract of *Thunbergia laurifolia*. Over consumption of alcohol is now a serious problem in Thai society and worldwide. Three pathologically life-threatening liver diseases induced by alcohol abuse are fatty liver (steatosis), hepatitis and cirrhosis. Scientific research in herbal medicine possessing hepatoprotective activity may be a great benefit as alternative therapy in alcohol induced liver diseases.

In the present investigation, primary culture of rat hepatocytes was used as an *in vitro* model to evaluate the hepatoprotective effect of aqueous extract of *Thunbergia laurifolia* (TLE) against ethanol. This effect of TLE was compared with silymarin (SL), the reference hepatoprotective agent. MTT reduction assay, ALT and AST were used as the criteria for cell viability. After 24 h of culturing, hepatocytes were treated with ethanol (96 μ l/ml) and various concentrations of TLE (2.5, 5.0, 7.5, 10.0 mg/ml) or SL (1, 2, 3 mg/ml) for 2 h. Both TLE and SL increased MTT formation nearly 2 times for TLE and 2-3 times for SL when compared to effect of ethanol alone. Ethanol induced the release of ALT and AST was reduced by TLE (2.5 and 5.0 mg/ml) and SL (1 mg/ml). High doses of TLE (10 mg/ml) and SL (3 mg/ml) caused more increase in the release of ALT induced by ethanol. Therefore appropriate doses of TLE and SL showed the hepatoprotective activity against ethanol induced cytotoxicity in primary culture of rat hepatocytes.

Key words : *Thunbergia laurifolia*, ethanol, silymarin, hepatoprotective