

## Therapeutic Evaluation of Bacopa Monnieri Extract on Liver Fibrosis in Rats

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**Abstract :** Liver fibrosis is caused by the activation of hepatic stellate cells in the liver to secrete excessive and deposition of extracellular matrix. In recent years, many treatment strategies have been developed to reduce the activation of hepatic stellate cells and therefore to increase the decomposition of extracellular matrix. Bacopa monnieri, an herbaceous plant of the scrophulariaceae, containing saponins and glycosides, which with antioxidant, anti-inflammation, pain relief and free radical scavenging characteristics. This study was to evaluate the inhibition of hepatic stellate cell activity by Bacopa monnieri extract and its therapeutic potential in treating thioacetamide-induced liver fibrosis in rats. The results showed that the IC<sub>50</sub> of Bacopa monnieri extract was 0.39 mg/mL. Bacopa monnieri extract could effectively reduce H<sub>2</sub>O<sub>2</sub>-induced hepatic stellate cells inflammation. In the TAA-induced liver fibrosis animal studies, albumin secretion recovered to normal level after treated with Bacopa monnieri extract for 2-w, and fibrosis related proteins,  $\alpha$ -SMA and TGF- $\beta$ 1 levels decreased indicating the extract exerted therapeutic effect on the liver fibrosis. However, inflammatory factors TNF- $\alpha$  obviously decreased after 4-w treatment. In summary, we could successfully extract the main component-Bacopaside I from the plant and acquired a potential therapy using this component in treating TAA-induced liver fibrosis in rat.

**Keywords :** anti-inflammatory, Bacopa monnieri, fibrosis, hepatic stellate cells, water extract

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