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The Potential Protective Impact of *Spirulina platensis* Against Thioacetamide-Induced Liver Fibrosis in Rats

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Abstract : The present study was carried out to investigate the possible protective role of *Spirulina platensis* in modulating hepatic fibrosis induced by thioacetamide. Forty eight male Sprague-Dawley rats were randomly allocated into four groups (Gps), twelve rats each; Gp1 received distilled water orally by gavage and served as control negative group, Rats of Gp2 were daily administered Spirulina in distilled water at a dose of 300 mg/kg body weight, Rats of Gp3 were intraperitoneally injected with thioacetamide (TAA) in distilled water twice weekly at a dose of 200mg/kg body weight. While, Rats of Gp4 were co-administered Spirulina and thioacetamide (TAA) as in Gp2 and Gp3. All treatments continued for eight weeks. Serum samples were separated and used for estimation of hepatic function tests, body and liver weights were estimated and tissue specimens were collected for histopathological and immunohistochemical studies. Our results revealed that Spirulina was able to improve body weight, liver function markers (AST, ALT, ALP and Bilirubin) and hinder the progress of fibroplasia induced by TAA to great extent. Spirulina co-administration induced marked decreased apoptotic figures among the hepatic parenchymal cells as well as decreased the immune positivity of α-SMA, which all suggesting its role as a hepatoprotective agent.
Key words: *Spirulina platensis*, Thioacetamide, Liver Fibrosis.

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