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Investigation into hepatoprotective and antioxidant potentials of *Epilobium hirsutum* on iron dextran induced hepatotoxicity in Sprague Dawley rat

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Present study deals with investigation of hepatoprotective and antioxidant potentials of *E. hirsutum* in iron overloaded rats. The hepatotoxicity was induced by administering six IP injections of iron dextran (12.5 mg/100 g) uniformly distributed over a period of 30 days. Different fractions of *E. hirsutum* were given orally whereas Deferoxamine (DFO) was given subcutaneously for 30 days. The various biochemical parameters were estimated on 15th and 30th days of treatment whereas antioxidant parameters were estimated on 30th day of treatment. The methanolic fraction of methanolic extract (MFME) and methanolic fraction of aqueous extract (MFAE) of *E. hirsutum* significantly ($P<0.01$) decreases Superoxide Dismutase (SOD), Catalase (CAT) and Glutathione (GSH) whereas significantly ($P<0.01$) increases Malondialdehyde (MDA) as compared to the disease control (DC) rats. There were significant ($P<0.01$) hepatoprotective effects shown by MFME and MFAE of *E. hirsutum*. Hence present study concluded that MFME and MFAE of *E. hirsutum* have hepatoprotective and antioxidant effect. The possible mechanism of action as hepatoprotective may be due to its antioxidant potential by scavenging free radicals through iron chelation.

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