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Hepatoprotective effect of ethanolic extract of *Lavandula officinalis* L. in alloxan-induced diabetic rats

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Plants have been the basis for medical treatments through much of human history. Even though active compounds of many herbal drugs were unknown, they have been widely prescribed by the practitioners of the traditional medicines due to their beneficial effects and low cost. Although the primary feather of diabetes is hyperglycemia, but diabetic disease can cause damage in several organs like hepatic tissue in the long term period so the present study was conducted to determine the hepatoprotective activity of *Lavandula officinalis* L. ethanolic extract in the alloxan-induced diabetic rats. Twenty-eight male Wistar rats [200-250 g weight] were randomly divided into four groups as follows: Healthy control group (HC) received saline (0.9% i.p.) in all experimental days, diabetic control group (DC) received single dose of alloxan (120 mg/kgb.w., i.p.), First treatment group (FT) received single dose of alloxan and 100 mg/kg (LOE) i.p. for 21 days in the diabetic rats, second treatment group (ST) received single dose of alloxan and 200 mg/kg LOE i.p. for 21 days. After termination of experimental days'; liver tissue dissected to measure activity of some antioxidant enzymes such as superoxide dismutase (SOD), catalase (CAT) and lipid peroxidation (MDA) by spectrophotometer. Blood samples collected to measure Aspartate transaminase (AST) and Alanine transaminase (ALT) in the serum by using commercially available diagnostic kits. This study revealed that intraperitoneal administration of LOE for 21 days, afforded significant hepatoprotection against alloxan-induced elevation in serum marker enzymes AST (38%) and ALT (38.65%) $P<0.05$, liver antioxidant enzymes activities SOD (68.61%) $P<0.01$, CAT (41.53%) and liver lipid peroxidation (44.74%) $P<0.05$ compared to DC. The present study indicated the hepatoprotective effect of LOE in diabetic rats.

Biography

Shokoufeh Ghavamian is currently pursuing BSc in General Biology at University of Tabriz, Iran. She has several articles under review in reputed journals about diabetes and herbal treatment.

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