



Antioxidant potential of *Taraxacum officinale* against carbon tetrachloride induced oxidative stress in rats.

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ABSTRACT

Free radicals are regularly produced in the body as a result of normal aerobic cellular metabolism. The body's natural in-built antioxidant system plays a vital role in preclusion of any harm due to free radicals. However, excessive production or addition of free radicals from environment to living system and weak defense mechanism of antioxidants often leads to serious consequence leading to oxidative stress and other ailments. Antioxidants from natural sources are now being considered as convincing therapeutic remedy against serious liver injury due to oxidative stress as they have capability to combat by neutralizing free radicals. This study was aimed to evaluate the in vivo antioxidant potential of ethanolic leaf extract of *Taraxacum officinale* (EETO) against carbon tetrachloride (CCl₄) induced oxidative-stress mediated hepatotoxicity in rats. For the antioxidant study, the analysis of superoxide dismutase (SOD), glutathione (GSH), catalase (CAT) and lipid peroxidation (LPO) in liver homogenate of wistar albino rats were done. Our results clearly indicated that CCl₄ intoxication decreased the levels of GSH, CAT and SOD, while increased the level of LPO.

The extract both at the doses of 100 and 200 mg/kg b. wt. highly significantly (P < 0.001) increased the reduced levels of GSH, CAT and SOD compared to the CCl₄-treated animals, while as decreased the increased level of LPO as compared to CCl₄-treated animals. The findings of the study showed that the leaf extract of *Taraxacum officinale* possess a potential antioxidant activity.

Keywords: Antioxidants, carbon tetrachloride, CAT, free radicals, GSH, LPO, *Taraxacum officinale*, SOD.