

## عنوان مقاله:

Cardioprotective Effect of Saffron Extract and Safranal in Isoproterenol-Induced Myocardial Infarction in Wistar Rats

## محل انتشار:

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## خلاصه مقاله:

**Objective(s):**This study was designed to evaluate the cardioprotective effect of *Crocus sativus* L. (saffron)aqueous extract and safranal, the major constituent of the essential oil of saffron, on lipid peroxidation, biochemical parameters and histopathological findings in isoproterenol (ISO)-induced myocardial infarction in Wistar rats. **Materials and Methods:**The saffron extract (۲۰, ۴۰, ۸۰ and ۱۶۰ mg/kg/day IP) or control were administered for ۹ days along with ISO (۸۵ mg/kg, SC, at ۲۴ hr interval) on ۸th and ۹th day in rats. Activities of creatine kinase-muscle, brain (CK-MB) and lactate dehydrogenase (LDH) were measured using standard commercial kits. The level of malondialdehyde in heart tissue was estimated with thiobarbituric acid reactive species test. For histopathological examination, hematoxylin and eosin (H&E) staining was used. **Results:**ISO administration induced a statistically significant increase ( $P < 0.001$ ) in serum LDH and CK-MB and a significant increase ( $P < 0.001$ ) in the levels of thiobarbituric acid reactive substances (TBARs) in the heart as compared to vehicle control rats. Saffron pretreatment (۲۰, ۴۰, ۸۰ and ۱۶۰ mg/kg IP) or safranal pretreatment (۰.۰۲۵, ۰.۰۵۰, ۰.۰۷۵ ml/kg IP) for ۸ days, significantly decreased ( $P < 0.001$ ) the serum LDH and CK-MB and myocardial lipid peroxidation as compared to ISO- induced rats. Histological findings of the heart sections confirmed myocardial injury with ISO administration and preserved nearly normal tissue architecture with saffron or safranal pretreatment. **Conclusion:**Saffron and safranal may have cardioprotective effect in ISO-induced myocardial infarction through modulation of oxidative stress in such a way that they maintain the redox status of the cell

## کلمات کلیدی:

*Crocus sativus*, Isoproterenol, Lipid Peroxidation, Myocardial infarction, Oxidative stress, Saffron, Safranal

## لینک ثابت مقاله در پایگاه سیویلیکا:

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