

## EFFECT OF BIXIN OVER LIPID PROFILE AND HEPATIC FUNCTION BIOCHEMISTRY MARKERS OF HYPERCHOLESTEROLEMIC RATS

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Bixin, an oil-soluble carotenoid, is known as the major coloring compound in annatto (*Bixa orellana* L.). The present study was undertaken to investigate the effect of two different (0.03% and 0.15%) doses of bixin on lipid profile. Male Fischer rats were divided into six groups: The C group was fed on the standard diet; the CB0.03% was fed the standard containing 0.3g/100g bixin diet; the CB0.15% was fed the standard containing 1.5g/100g bixin diet; H group was fed a 1g/100 g cholesterol diet; the HB0.03% was fed the cholesterol containing 0.3g/100g bixin diet; and the HB0.15% was fed the cholesterol containing 1.5g/100g bixin diet. They consumed food and water *ad libitum* for 8wk. In this study, in general, bixin reverted all effects of the high-lipid diet. Bixin treatment lowered fat liver amounts and prevented the hepatic damage. The bixin treatment improved the diet-induced dyslipidemia: it reduced the serum levels of total cholesterol and LDL-cholesterol and increased the HDL-cholesterol levels. In conclusion, our results indicate that dietary bixin decreases serum total cholesterol and LDL-cholesterol, increases HDL-cholesterol and prevents hepatic injury provoked by high-lipid diet.

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**Keys words:** bixin, *Bixa orellana*, hypercholesterolemia, hepatic function, rats