

## **Paper No. 1**

### **Title: Hesperidin and Tiger nut Reduced Carcinogenicity of DMBA in Female Rats.**

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#### **ABSTRACT**

Nutritional studies recommend the regular consumption of fruits and vegetables to favor a healthy quality of life. This study was carried out to evaluate the efficacy of hesperidin and tiger nut against the carcinogenic activity of DMBA in female rats. 72 adult Sprague Dawley female rats were divided equally into six groups: control group (I); Hesperidin treated group (II); Tiger Nut treated group (III); DMBA treated group (IV); HES-DMBA treated group (V); and TN-DMBA treated group (VI). There was a significant increase in serum levels of carcinoembryonic antigen, total sialic acid, progesterone, estradiol, ALT, AST, LDH, urea and creatinine, and significant decrease in reduced glutathione level, superoxide dismutase, catalase and glutathione peroxidase activities of DMBA treated group compared to control. In conclusion, our results suggested that supplementation of diets with hesperidin provided antioxidant and chemoprotective activities more significant than tiger nut against the toxicity of DMBA in breast, liver and kidney tissues.

**Keywords:** DMBA, Hesperidin, Tiger nut, CEA, Progesterone, Estradiol

