

## **Assessment of Protective Effect of a Bioflavonoid Quercetin in Dimethyl Benzanthrane-Induced Breast Cancer in Female Wistar Rats**

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**Abstract :** The objective of this study was to assess the role of Quercetin in 7, 12-Dimethyl benzanthrane (DMBA) induced breast cancer in female Wistar rats. A total of 30 female Wistar rats (total 6 groups,  $n = 5$  per group) 6 - 8 weeks old, weighing 150 gm were used in the study. DMBA was given at the dose of 7.5 mg/kg subcutaneously in the mammary region once a week for 4 consecutive weeks in experimental group. Vincristine was given in the dose of 500 mcg/kg intraperitoneally every week for 4 consecutive weeks in group (E1). Quercetin was given orally in a dose of 200, 400, 800 mg/kg in group E200, E400, and E800 respectively. The statistical significance of the data was determined using one way analysis of variance. It was evident that Quercetin 200, 400, 800 mg/kg /oral for 120 days treated rats resulted comparable effects to that of standard vincristine and control groups. The outcomes indicated that Quercetin improved the antioxidant levels in plasma erythrocyte lysate and breast tissue and was effective in averting DMBA induced oxidative damage. Quercetin was found to be either equally effective or more effective than Vincristine in all the factors studied.  
**Keywords:** Quercetin, Dimethyl benzanthrane, antioxidant, erythrocyte lysate.

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