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Radio protective effect of black mulberry extract on radiation- induced damage in bone marrow cells and liver in rat

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Abstract

Ionizing radiation by producing free radicals induces tissue oxidative stress and has clastogenic and cytotoxic effects. The radio protective effect of black mulberry extract (BME) has been investigated on liver tissue and bone marrow cells in the rat. Intraperitoneal (ip) administration of 200 mg/kg BME three days before and three days after 3Gy and 6Gy gamma irradiation significantly reduced the frequencies of micro nucleated polychromatic erythrocytes (MnPCEs) and micro nucleated norm chromatic erythrocyte (MnNCEs) and increased PCE/PCE+NCE ratio in rat bone marrow compared to the non-treated irradiated groups. Moreover, this concentration of BME extract decreased the level of malondialdehyde (MDA) and superoxide dismutase (SOD), as well as enhanced the total thiol content and catalase activity in rat's liver compared to the non-treated irradiated groups. It seems that BME extract with antioxidant activity reduced

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