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Effect of Tumour Promoter Anthralin on Gamma Radiation and 4-nitroquinoline 1-oxide Induced Genotoxicity in Diploid Yeast

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ABSTRACT The potentiating effect of tumour promoter anthralin on gamma radiation and 4-Nitroquinoline 1-oxide (4-NQO) induced gene conversion and back mutation was studied using diploid yeast *Saccharomyces cerevisiae* D7. Cells were exposed to 20-400 Gy of gamma radiation and plated on media without anthralin or containing 0.05-10 mg/ml of anthralin. In another set of experiments, cells were treated with 0.15-0.5 mM 4-NQO and plated on media without anthralin or containing 0.05-0.5 mg/ml of anthralin. The results indicated that anthralin did not modify gamma radiation induced gene conversion or back mutation. Anthralin, however, was found to enhance 4-NQO induced back mutation but not gene conversion. The enhancement was highest with the lowest concentration of anthralin and it decreased subsequently as anthralin concentration was increased.

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