

Induction of *phr* gene expression in *Escherichia coli* strain KY706/pPL-1 by UVA (365 nm) irradiation

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Abstract - We report the induction of *phr* gene expression in the *Escherichia coli* strain KY706 pPL-1 by UVA irradiation. The induction of *phr* gene expression was monitored by the activity of β -galactosidase enzyme and was found to depend on the UVA dose and the post irradiation incubation period in the nutrient medium. Mechanistic studies carried out using quenchers and enhancer for singlet oxygen and hydroxyl radicals showed the involvement of these reactive oxygen species in the induced enzyme induction.

Key words: UVA irradiation, SOS repair, *phr* gene induction.

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