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## Isolation and Characterization of UV-inducible genes in Eukaryotic cells

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To study UV-inducible responses in *S. pombe*, five UV-inducible cDNA clones were isolated from *S. pombe* by using subtraction hybridization method. To investigate the expression of isolated genes, the cellular levels of the transcripts of these genes were determined by Northern blot analysis after UV-irradiation. The transcripts of isolated gene (UVI30) increased rapidly and reached maximum accumulation after UV-irradiation. Compared to the message levels of control, the levels of maximal increase were approximately 5 fold to UV-irradiation. In order to investigation whether the increase of UVI30 transcripts was a specific results of UV-irradiation, UVI30 transcript levels were examined after treating the cells to Methylmethane sulfonate (MMS). The transcripts of UVI30 were not induced by treatment of 0.25% MMS. These results implied that the effects of damaging agents are complex and different regulatory pathways exist for the induction of these genes. To characterize the structure of UVI30 gene, nucleotide sequences were analyzed. The nucleotide sequence of 1,340 nucleotide excluding poly(A) tail contains one open reading frame, which encodes a protein of 270 amino acids. The predicted amino acid sequences of UVI30 do not exhibit any significant similarity to other known sequences in the database.