**E335** Mutagenic DNA-repair genes in *Aspergillus nidulans* : The *uvsI* gene is UV- inducible.

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Defects in the uvsI gene of *Aspergillus nidulans* resulted in high UV sensitivity and reductions of spontaneous and UV-induced reversion of alleles. An uvsI-complementing clone was obtained from a chromosome III specific library. Sequence determination of a minimally localized DNA fragment having the uvsI-complementing activity within the clone revealed an ORF with the highest aminoacid identity to yeast REV3, a subunit of the DNA polymerase ζ involved in translesion DNA synthesis. The uvsI ORF interrupted by a small intron of 54bp encodes a polypeptide of 1,681 aminoacid with calculated MW of 191.4KDa. In UVSI, the well-conserved regions, I-VI, among DNA polymerases were present in correct order. In addition, two zinc-finger motives [C-X2-C]-X11-[C-X2-C] and [C-X2-C]-X10-[C-X4-C] existed similary to REV3. A northern blot band of about 5.3Kb was detected. The transcription level of *uvsI* gene is increased by UV irradiation, suggesting that error-prone repair system mediated by the *uvsI* gene should be inducible. We constructed knock-out and over-expression mutants of the *uvsI* gene and examined their phenotypes.

**E336** Purification and Characterization of Catalase from *Rhodospirillum rubrum* ATCC 11170

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Aerobically grown photosynthetic bacterium *Rhodospirillum rubrum* ATCC 11170 showed five different catalases. Among them, two catalases were catalase-peroxidase. One of two catalase- peroxidase which had comparatively strong activity was partially purified and characterized. The enzyme showed its activity at broad range of pH(5-10). It was heat stable and was not inhibited by 10mM 3-amino-1,2,4-triazole. Treatment of the enzyme with organic solvent mixture of ethanol/chloroform caused a partial loss of activity.