

E315 Regulation of Laccase Gene Expression of *Coprinus congregatus* in the Low pH Medium

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When *Coprinus congregatus* was transferred to a low pH medium, the fungus synthesized and secreted the hyphal tip laccase which was a membrane-associated enzyme on a agar culture condition. In order to research the regulation of the laccase gene expression in the low pH medium, we added 5'-fluorouracil to the low pH medium. The hyphal tip laccase activity was decreased to 10-20% which meant the laccase gene expression was regulated at the transcriptional level. PCR DNA amplification was carried out using the primers which were based on conserved sequences around the two pairs of histidines in the N-terminal copper-binding regions of known basidiomycete laccase. The PCR product was used to analyze the regulation of the laccase gene expression in the low pH medium by the Northern hybridization.

E316 Responses of *Pseudomonas* sp. DJ-12 to pollutant chemicals

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The organisms can response and adapt to the environmental stresses in order to survive when they expose to the extreme environments including chemical pollutants. The most distinguished response is increased tolerance to the stress for survival and production of stress-shock proteins which are expressed by induction of several stress-shock genes. *Pseudomonas* sp. DJ-12 is capable of degrading biphenyl and 4-chlorobiphenyl at concentration of 7 and 5 mM, respectively. In this study, the responses of the organism the chemicals at the higher concentration and other recalcitrant chemical pollutants were studied by examining for their survival and production of stress-shock proteins, Such studies were extended to examine the crossed responses of the organism to the stresses of pollutant chemicals, heat shock.