

**E301** Regulation of an Acidic Laccase (*cla2*) in *Coprinus congregatus* under Acidic Culture

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When *Coprinus congregatus*, a mushroom forming fungus is transferred to an acidic liquid medium (pH 4.1), it secretes lots of a laccase isozyme (acidic laccase; *cla2*) into the culture supernatant. We have cloned two laccase gene fragments by PCR technique using chromosomal DNA and cDNA as the templates. When Northern analysis was carried out using *cla 2* gene as a probe, the acidic culture showed strong laccase gene expression. The gene expression was decreased as the enzyme activity was getting lower after 24 h. Therefore, the acidic laccase gene was regulated at the transcription level, and the acidic laccase enzyme was implicated in the neutralization (& protection) of this fungus under acidic condition.

**E302** Induction of Growth Phase Specific Autolysis by Chloramphenicol and Sodium Azide in *Bacillus subtilis* 168

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Autolysis induction by low concentration of sodium azide occurred growth phase specifically in *Bacillus subtilis* 168. Cells of *B. subtilis* 168 in various growth phase in liquid medium was taken out and treated with different concentration of chloramphenicol(CAM) and sodium azide. Autolysis was induced by 50 $\mu$ g/ml of CAM and 750 $\mu$ g/ml of sodium azide treatment in cell suspension of which optical density(O.D.) is 0.85 at 590nm in 1xLB medium, those are in the early stationary phase. Cells took before and after this point did not commence autolysis by CAM and sodium azide. Exhaustion of sugar(including glucose) in the culture medium drives *Bacillus* cell into autolysis.