



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Heterologous Expression of Genes in the Yeast *Saccharomyces cerevisiae*

Numan ÖZCAN Çukurova University, Agricultural Faculty, Department of Animal Science, Adana -TURKEY Abstract :Both an α -amylase gene of *Bacillus subtilis* RSKK246 and a gene encoding β -glucanase from *B. subtilis* RSKK243 were cloned and expressed in both *E. coli* XL1-Blue MRF and *B. subtilis* YB886 by using the vectors pUC18 and pUB110 respectively. These genes were also cloned into the *E. coli*-yeast shuttle vectors pRS406 and pRS416 for transfer into the yeast *Saccharomyces cerevisiae*. These constructs carrying α -amylase and α -glucanase genes which were cloned into the pRS406 vector, were expressed by integration into the yeast chromosome. These genes were also expressed in the yeast by autonomous replication of the ARS/CEN plasmid pRS416. This work demonstrates that genes belonging to *B. subtilis* can replicate in both *E. coli* and in the yeast *S. cerevisiae*. Key Words : α -amylase, β -glucanase, *Saccharomyces cerevisiae*, *Bacillus subtilis*, gene cloning

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