LIST OF TABLES

Table 1: Harpins of phytopathogenic bacteria.
Table 2: Different strains of Saccharomyces cerevisiae.
Table 3: Details of the primers used in the present study.
Table 4: Details of constructs used in the present study.
Table 5: Cycling conditions to amplify full-length and truncated hrpZ$_{Pst}$, hrpZ$_{Psp}$, hrpZ$_{Pst}$ and alpha factor leader sequence.
Table 6: Conditions used for crystallization of harpin$_{Pst}$.
Table 7: Comparison of the characteristic features of plant HR and YCD.
LIST OF FIGURES

FIG 1: PCR amplification and cloning of $hrpZ_{ps}$ in pQE30.
FIG 2: Harpin$_{ps}$ expression in E. coli.
FIG 4: Conditional expression of harpin$_{ps}$ in S. cerevisiae Y187.
FIG 5: Immunoblot of harpin$_{ps}$ expression in S. cerevisiae Y187 and E. coli.
FIG 7: Characterization of YCD by conditional expression of $hrpZ$ in S. cerevisiae Y187.
FIG 8: S. cerevisiae Y187 cells expressing harpin$_{ps}$ confers a lethal phenotype.
FIG 10: PCR amplification and cloning of alpha factor leader sequence upstream of $hrpZ$.
FIG 18: Release of cytochrome C in harpin$_{ps}$-mediated YCD.
FIG 21: Conditional expression of $hrpZ$ in strains of S. cerevisiae.
FIG 22: PCR amplification and cloning of $hrpZ_{ps}$, $hrpZ_{psp}$ and $hrpZ_{pst}$ in pYEUT.
FIG 23: Conditional expression of pYEUT-$hrpZ_{psp}$ and pYEUT-$hrpZ_{pst}$ in S. cerevisiae Y187.
FIG 24: Diagramatic presentation of the details of $hrpZ_{ps}$ and twelve different truncated mutants.
FIG 25: PCR amplification of $hrpZ$ truncated mutants.
FIG 28: Characterization of pYEUT-hrpZN1 to N4 and NCL mutants of S. cerevisiae Y187.
FIG 29: Characterization of pYEUT-hrpZC1 to C7 mutants of S. cerevisiae Y187.
FIG 30: Multiple sequence alignment of harpins from Erwinia sp. and Pseudomonas syringae.
FIG 31: Multiple sequence alignment of harpins from Erwinia sp.
FIG 32: Secondary structure prediction for harpin belonging to Pseudomonas syringae (hrpZ).
FIG 33: Protein crystallization set-up.
FIG 34: HarpinPss crystals.