F302

Cloning of a Gene encoding a Cell wall hydrolase of *Moraxella* sp. into *Escherichia coli*

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The authors have cloned a gene of *Moraxella* sp. encoding cell wall hydrolytic activity into *E. coli*. Among 5,000 transformants of a genomic bank, a positive clone which formed clear-zone on the agar plate containing 0.2% heat-killed *Micrococcus luteus* ATCC 4698 was selected. Restriction mapping and deletion analysis of the recombinant plasmid carrying a 3.7 Kb insert suggested that the gene was located within a 1.1 Kb *Bam*HI-*Pst*I fragment. The subclone, pMPT1200, harboring 1.1 Kb *Bam*HI-*Pst*I region was showed stronger lytic activity than did pMXA282 harboring 3.7 Kb insert. Southern blot analysis of *Moraxella* sp. chromosomal DNA digested entirely with *Pst*I, *Sal*I and *Pst*I+*Eco*RI was performed with the 1.1 Kb *Bam*HI-*Pst*I fragments labelled by positively-charged complexes of peroxidase as a probe. Strongly hybridizing bands were observed at 1.3 Kb in the *Pst*I, *Pst*I+*Eco*RI and 2.65 Kb *Sal*I, respectively.

F303

Molecular analysis of the karyotype of *Fusarium* spp.

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Pulsed-field gel electrophoresis(PFGE) was used to identify karyotypes of *Fusarium* species. Intact chromosomal DNAs were prepared from protoplast and separated by PFGE in agarose gel. 8 to 10 distinct chromosomal bands were resolved by varying electrophoretic condition and agarose concentration. Using the *Schizosaccharomyces pombe* and *Saccharomyces cerevisiae* chromosomes as size standards, the sizes and number of chromosomes were estimated. Chromosomal DNA sizes were ranged from 0.6 to over 6.0 Mb approximately which gave estimate of genome size of 25 - 30 Mb. When separated chromosomes of *Fusarium* spp. were probed with random amplification DNA, southern blotting was used to identify chromosomal polymorphisms. The hybridization patterns among *Fusarium* spp. were showed some differences according to species.