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Cloning of a DEAD-box RNA helicase genes in *Candida albicans*

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The *ROK1* gene was identified as a high copy number plasmid suppressor of the *KEM1* null mutation. The *ROK1* gene is essential for mitotic cell growth and considered to affect the microtubule and spindle pole body function in yeast *Saccharomyces cerevisiae*. The DNA sequence analysis of *ROK1* revealed on open reading frame, potentially encoding a 564 amino acid. The *ROK1* protein sequence contain highly conserved domains found in the D-E-A-D protein family of ATP-dependent RNA helicase. In a search for *ROK1* homologs in other organisms, we performed western blot analysis on protein extracts from different species. Anti-*ROK1* antibodies detected cross-reacting antigens in human pathogen *Candida albicans* and *Drosophila melanogaster*. To isolate the *ROK1* homolog gene in *Candida albicans* by using genetic complementation method. We constructed an yeast strain expressing *ROK1* conditionally. we isolated three candidates of 30,000 transformants. By transforming this strain with *Candida* genomic library restriction analysis on these clones are in progress.

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RAPD analysis and 18S rDNA partial sequencing in 11 strains of *Fusarium oxysporum* formae speciales

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To assess genetic diversity among 11 strains of *F. oxysporum* f. sp., we used RAPD analysis and sequencing of the partial small subunit ribosomal RNA - encoding gene(18S rDNA). For RAPD analysis, 20 optimal primers were chosen from the 40 tested. The size of amplified DNA fragments generated with these primers ranged from 0.1 to 3.0 kb. Similarity coefficients between the strains were calculated, and UPGMA cluster analysis was used to generate a dendrogram showing relationship among them. For comparison of 18S rDNA sequence variation, about 500 base region of the 18S rDNA was amplified by PCR with the designed primers and was sequenced.