

**A305** Characterization of heavy metal resistant streptomycetes strains

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Two strains of heavy metal resistant streptomycetes were selectively isolated from different sites at Kong-ju and Cheo-an. The strain P5 could survive the relatively high concentration of Pb, Zn and Cu ions. The second isolate (C1) had similar heavy metal susceptibility.

Both of these strains formed well-developed, flexible aerial mycelia and smooth, recti-flexible spore chains. Cell wall was determined as type I. P5 and C1 contained LL-diaminopimelic acid with no characteristic sugars in cell walls. Phospholipid patterns were type PII with phosphatidylethanolamine. The major fatty acids were anteiso-C15:0, iso-C16:0 and the major menaquinones of P5 and C1 were MK-9(H6), MK-9(H8) and MK-9(H4), MK-9(H6), MK-9(H8), respectively. 16S rDNA sequence similarity of P5 was 99.52% with *Streptomyces subbrutillus*, that of C1 was 98.62% with *Streptomyces setonii*.

**A306** Inter- and Intra-specific Relationships of Vibrios from Chick Seabird, Little Tern (*Sterna albifrons*) and Shrimps (*Crangon affinis*) Based on Randomly Amplified Polymorphic DNA (RAPD) markers

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The strains of Vibrios isolated from seabirds in July, 1997 and shrimps in Summer, 1996 at Nakdong River and were identified by 22 biochemical characteristics. We couldn't identify 24 strains of isolates because their biochemical characteristics didn't agree with that of any type species. Genetic relationship of 24 strains were determined by a RAPD assay for using basic data of their identification. The results were analyzed by a phenetic analysis with the NTSYS-PC software.