

B312 **Endemic analysis of fluorescent *Pseudomonas* by REP-PCR**

Suk-Kyun Han, Jae-Heung Park and Tae-Young Ahn*

*Dept. of Microbiology, Dankook University

Pseudomonas species are plant, animal, and human pathogens; exhibit plant pathogen-suppressing properties useful in biological control; or express metabolic versatility valued in biotechnology and bioremediation. Fluorescent *Pseudomonas* species were isolated 339 strains from each of three sites in each of the regions (Chile 64 strains; Australia 86 strains; California 189 strains) on the SI medium, and total 339 strains were determined band patterns with repetitive extragenic palindromic(REP) PCR genomic fingerprints. We found that our collection of 339 isolates included 177 genotypes. Sixty four genotypes were found in Chilean soil, eighty six genotypes were found in Australian soil, and one hundred eighty nine genotypes were found in Californian soil. Some genotypes were not only found in one region, but also in any other continental region. These results suggest that fluorescent *Pseudomonas* are globally dispersed and is distributed among very diverse genotypes.

B313 **Study on Phenol Degradation by *Rhodococcus* sp. EL-43P**

Seong Nae Won*, Hee Sook Lee, Joon Gu Kim, Geon Lee, Sang Joon Lee

Department of Microbiology, Pusan National University

The microorganisms which degrade phenol were isolated from Yangsan river. Among them, the strain EL-43P had the highest phenol degradability and identified as a *Rhodococcus* sp. according to morphological, cultural, and biochemical property. *Rhodococcus* sp. EL-43P was able to degrade high phenol concentrations up to 10mM within 25 hours in the medium consisting of 0.1% KH_2PO_4 , 0.2% $\text{NH}_4\text{H}_2\text{PO}_4$, 0.02% $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$, 50 μM $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$, 0.5 μM FeCl_3 , initial pH 8.0 and temperature 30°C in rotary shaker at 200rpm. *Rhodococcus* sp. EL-43P was able to grow at the various chlorinated phenols, benzene, and toluene, respectively. *Rhodococcus* sp. EL-43P had the catechol 1,2-dioxygenase which degrades phenol by *ortho* pathway. This strain also had toluene dioxygenase.