

Virulence Factors and Genotyping of *Vibrio parahaemolyticus*

Eun-Gyoung Lim, Young-Hee Kim, Ji-Yung Mun, Yang-Hyo Oh
and Yung-Bu Kim

Department of Microbiology, College of Medicine, Pusan National University, Pusan, Korea

Six strains of *Vibrio parahaemolyticus* isolated from diarrheal patients and 12 strains from seawater were serotyped and analyzed for biochemical characteristics, antibiotic sensitivity and detection of *toxR*, *gyrB*, *tdh1*, and *trh2* genes. Arbitrarily-primed polymerase chain reaction was performed on the 6 strains from patients and the results were as followed. The *V. parahaemolyticus* isolated from patients belonged to 5 different serotypes: O4:K8, O4:KUT, O6:K18, O10:K71 and O3:K6, but those isolates from sea water belonged to 5 different serotypes: O1:KUT, O2:KUT, O3:K45, O4:K37 and O10:KUT. All strains explained have different serotypes depending on the different source. Both *toxR* and *gyrB* genes were detected from all strains isolated. As for control the 2 strains of serotype O3:K6 and 6 strains isolated from patients, serotype O3:K6 were resistant to oxacillin, penicillin, and vancomycin. All strains were sensitive to chloramphenicol and tetracycline yet the antibiogram type showed 5

groups from I to V. The *trh1* was detected both from serotype O4:KUT and O6:K18 from patients and the *trh2* was also detected from one strain from each O10:K71 and O1:KUT isolated from patients and seawater respectively. The *tdh* gene was only detected from two strains of O3:K6 from patients of 1998. The *tdh*, *trh1* and *trh2* were not detected from 7 strains out of 12 strains isolated from seawater whereas the production titer of TDH isolated from patients showed from 2048 times to 4096 times.

Four strains of the serotype O3:K6 isolated from Korea, India and Japan as well as 3 strains from Korean patients were tested by AP-PCR to classify serotypes. As for its result the amplicon showed the same in the 4 strains of the serotype O3:K6 whereas the four strains of different serotype from patients are so difference as to explain no inter-relations at all. The result explains that the serotype O3:K6 is the same genes regardless from where it is isolated.