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## MOLECULAR IDENTIFICATION OF ESBL-PRODUCING GENE BLATEM IN MRSA AND MEATS ISOLATED BACTERIA

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**S***taphylococcus aureus* is one of the most pathogenic organisms which cause infections in both healthcare and community settings. The proportion of methicillin-resistant *S. aureus* (MRSA) in healthcare-associated (HA) isolates was very high in South Korea. In this study, antimicrobial resistance profiles of *S. aureus* and meats isolated bacteria were determined by disc diffusion method. PCR was applied for detecting the presence of antibiotic resistance genes and blaTEM types. In total of 18 *S. aureus* and 36 meats isolated bacterias. All strains carried blaTEM gene which encodes an enzyme belongs to extended-spectrum  $\beta$ -lactamases (ESBLs), conferring significant penicillin resistance. MRSA strains which carried type II SCCmec element presenting characteristic of multidrug resistance (MDR), these strains harbored resistance genes *ant(4')-Ia* and *ermA*, which showed positive correlation with kanamycin and erythromycin resistance, respectively. Genes *aac(6')-aph(2'')* and *tetM* were also found in these strains which phenotypically associated with gentamicin and tetracycline resistance. In addition, type IVA was the most prevalent SCCmec element in our study, which carried a variant class B mec complex. The J3 region of type IVA element may integrate a copy of plasmid pUB110, harboring *ant(4')-Ia* which phenotypically associated with kanamycin resistance. The molecular characteristics of MRSA strains in our study are unique compared with isolates which have spread internationally. This is the report to show the presence of blaTEM in meats isolated bacterias.

### Biography

Hwang has completed his PhD from Inha University. He is the director of RIS, a Bio Health solution. He has published more than 50 papers in reputed journals.

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