

## Genotyping of *Staphylococcus aureus* isolates from diabetic foot ulcer

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*Staphylococcus aureus* is a significant cause of nosocomial infection. Information on relatedness of bacterial isolates is essential for proper epidemiological investigation of an outbreak. Intra-speciation of *S.aureus* has been performed using various typing methods such as antibiogram assays, bacteriophage typing, immunotyping, multilocus enzyme electrophoresis, pulsed field gel electrophoresis. Multilocus sequence typing (MLST) can elucidate taxonomic relationship between strains based on genetic relatedness and has been applied in various studies for genotyping of *S.aureus*, since it provides unambiguous and transferable sequence data. In MLST typing, DNA sequences for fragments of seven housekeeping genes are compared with reference sequence available in public database and based on nucleotide variation, specific allele numbers are assigned to these sequences. We characterized thirteen *S.aureus* isolates from diabetic foot ulcer based on their antibiogram profile, Minimum Inhibitory Concentration values, biofilm production and two genotypic methods which included MLST and MLVA (Multiple loci variable tandem number repeat analysis). Our results showed that all the strains tested were multidrug resistant but showed 100% sensitivity to Chloramphenicol while least resistance was seen to Amikacin and Linezolid. MSSA strains produced comparatively less biofilm in vitro. The strains tested were further subtyped into eight different allelic profiles based on information obtained from MLST analysis. These results will be further discussed.

### Biography

I have completed my Masters in Microbiology & Immunology from Manipal University, Manipal. I am currently pursuing Ph.D. at Manipal Life Sciences Centre, Manipal University under the guidance of Dr. T.S. Murali. I have been awarded INSPIRE fellowship from Department of Science & Technology, GOI. My research work involves molecular profiling of microbial flora in diabetic foot ulcer.

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