

## The genes content of *S. aureus* strains responsible for hospital and community-acquired infections

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### Abstract

Hematopoietic stem MRSA strains were identified after the introduction of methicillin in therapy. Methicillin resistance is due to the acquisition of the *mecA* gene, which encodes PBP2a. Methicillin resistant *S. aureus* (MRSA) is responsible for hospital (HA-MRSA) and community-acquired infections (CA-MRSA). Toxic-shock syndrome toxin (TSST), enterotoxins (SE), exfoliatins (Ets), Panton-Valentine leukocidin (PVL) are SA pathogenicity factors. The genes for the staphylococcal enterotoxins, are placed on the *egc* locus and are controlled by the *agr* regulatory genes. The purpose of our study was to investigate the genes presence (*tsst*, PVL, *agr*, SEM & SEG) among the SA isolates; to establish the prevalence of these genes, to identify the resistant phenotypes and their correlation. Materials and methods: The study included clinical isolates. The identification and the AB resistance profiles of the strains were performed by standard and automated methods (Vitek2 Compact). The genes content of the isolated strains were detected by PCR. Results: In 21,3% of the strains the genes per isolate were up to 5 and in 27,7% were 2; The *tsst* gene was not detected. The gene contents was: SEM & SEG (44,7%), PVL (19.1%) and *agr* (48,9%): *agr* III (27,7%), *agr* I (10,6%), II (6,4%) and IV (2,1%). All arg positive strains are MRSA strains.

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### Biography

Lia Monica Junie, from the Microbiology Department of "Iuliu many peer-reviewed journals. She coordinated research projects, published books and more than 200 scientific articles in prestigious Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Journals. She organized and attended numerous national, international Romania. She is coordinating PhD doctor's thesis in the medicine field. She unfolds a fruitful National and

International scientific activity as an experienced microbiologist, having impressive CV. congresses, as president, member in the Organizing Committees, Invited speaker, Keynote speaker or Chairperson. She unfolds a high level activity after years of experience in research, evaluation, teaching and She is Member in the Board of Scientific Societies, Reviewer in administration both in hospital and education institutions.