Molecular Characterization of *Staphylococcus* spp. Belonging to the Culture Collection UFPEDA.

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Staphylococcus aureus is a human pathogens of great clinical importance and is responsible for outbreaks of infections both in hospitals and community. This study aims to identify different clinical isolates of *Staphylococcus* spp. from public hospital in Recife that are owned by Microorganisms Culture Collection UFPEDA and aims to investigate the sensitivity profile by classical and molecular techniques. To this, were reactivated 16 clinical isolates of *staphylococcus* spp that after growth in nutrient agar medium identification was performed by biochemical tests (salted mannitol, catalase and Gram stain) and molecular research by coagulase gene. The isolates were identified as *S. aureus* used to evaluate the antimicrobial susceptibility profile to methicillin and vancomycin, and then the research of the *mec*A gene was performed. For molecular test were used standard strains: *S. aureus* ATCC 25923 and *Staphylococcus epidermidis* UFPEDA183 as positive and negative control, respectivily. The results in the biochemical assay showed that all isolates used mannitol, but the molecular analysis 75% (12) of the isolates were confirmed as *S. aureus* and 25% (4) were identified as coagulase negative *Staphylococcus*. In the disk diffusion assay, 33.33% of *S. aureus* were resistant to methicillin but the presence of the *mec*A gene was evidenced in only 25% of *S. aureus* isolates. For the clinical isolate *S. aureus* UFPEDA 731, considered sensitive to methicillin by disk diffusion test, the presence of the *mec*A gene was detected. Comparing these methods, the molecular technique was more sensitive, can identify small amounts of DNA in the genes studied, as well as more precise not suffer from interfering action as easily as in conventional tests, making the most reliable molecular method for characterization of strains of *Staphylococcus* spp.

Key words: gene *mec*A, MRSA, *Staphylococcus aureus*.