

Antibiotic susceptibility pattern and biofilm formation in coagulase negative staphylococci

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Twelve species of coagulase negative staphylococci (*S. cohnii* 7, *S. cohnii ssp urealyticus* 12, *S. epidermidis* 5, *S. haemolyticus* 20, *S. hominis* 26, *S. intermedius* 4, *S. kloosii* 4, *S. lugdunensis* 4, *S. saprophyticus* 7, *S. sciuri* 5, *S. warneri* 3, and *S. xylosus* 3) exhibited varied susceptibility to antibiotics both within and between species. Species with differing susceptibilities were tested for ability to form biofilms. Antibiotic resistance was highest against tetracycline (74.7%) followed by penicillins (69.5%), fosfomycin (68.4%) and ampicillin (53.7%). Resistance to methicillin was 41%. A comparison between resistance patterns of methicillin resistant and sensitive strains showed that methicillin resistant strains had higher level of resistance to all β -lactams, aminoglycosides, fluoroquinolones, macrolides, tetracycline and trimethoprim-sulfamethoxazole. Multidrug resistance was highest in *S. epidermidis*, *S. haemolyticus*, *S. saprophyticus*, *S. intermedius* and *S. xylosus*. There was a significant association between biofilm formation and resistance to multiple antimicrobial agents in 60% of *S. epidermidis* strains as these were resistant to three or more groups of antibiotics.

Biography

Olayemi Ayepola completed her Ph.D. studies at Covenant University in 2012. Her area of research is antimicrobial chemotherapy and molecular epidemiology of pathogenic bacteria especially *Staphylococcus* species.

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