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### Effect of $\beta$ lactam Antibiotics with Aminoglycosides on Multidrug Resistance *Staphylococcus aureus*

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**Abstract:** A total of two hundred and ninety samples were collected from midstream urine taken from patients suffering from urinary tract infections, 21 isolates of *Staphylococcus aureus* were isolated and identified depending on their morphological properties (cultural and microscopical) and biochemical tests. The antibiotic sensitivity of the isolates is tested against twenty antibiotics, the isolates showed high resistance. The meropenem, imipenem, amikacin, nitrofurantoin, ciprofloxacin, and rifampin are found more effective. The inhibition concentrations of isolates were higher. The combination of  $\beta$ lactam with an aminoglycoside (Amikacin and gentamycin) antibiotics showed an active synergistic effect against the multidrug resistance of isolate.

**Keywords:** Minimum Inhibitory Concentration and Combination, Antibiotics. *S. aureus*.

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