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College of Science

**Molecular and Serological Detection of  
*Pseudomonas aeruginosa* from some  
Loci in AL Samawa City**

*A thesis*

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## Summary

A total of one hundred and fifty swab samples were collected during the period of August/2013 to January/2014 from different places in Al-Hussein Teaching hospital in Al-Muthanaa Province. Sixty samples were collected from operating rooms and ninety samples were collected from burn ward ( $p \leq 0.05$ ).

All of samples, fifty six isolates showed positive results of *Pseudomonas aeruginosa* which indicate a bacterial contamination rate of 37.33% with a high percentage in operating rooms with 55.36% ( $p \leq 0.05$ ).

All isolates (56) were tested for antibiotic susceptibility against 10 different antibacterial antibiotic by using disc diffusion method and these isolates exhibited multi resistant for several antibiotics (ceftazidim , ceftriaxon , cefotaxim and pencillin), with varied resistant to amikacin (83.9%), ciprofloxacin (32.1%), norfloxacin (39.3%), tobramycin (87.5%), gentamicin (73.2%), and piperacilin (96.4%) ( $p \leq 0.05$ ).

All of 56 of *P.aeruginosa* isolates were serotyped by slide agglutination test with a commercial antisera kits. (100%) were agglutinated in the pooled antisera. 13 serotypes were recognized in specimens and as followed O1 was 4 (7.14%), O2 was 1 (1.8%), O3 was 4 (7.14%), O4 was 2 (3.59%), O5 was 4 (7.14%), O6 was 15 (26.8%), O9 was 5 (8.9%), O10 was 1 (1.8%) , O11 was 6 (10.71%), O12 was 1 (1.8%). O13 was 2 (3.59%), O15 was 2 (3.59%), O16 was 9 (16%). O6 was the most prevalent serotype recorded in the present study with 15 isolates (26.8%). ( $p > 0.05$ ).

Detection of *algD* and *lasB* genes was done by using Polymerase Chain Reaction (PCR) for molecular identification of *P. aeruginosa*, **II**

Our results showed two different positive bands for *lasB* (100%) and *algD* (89.2%) in 56 and 50 isolates respectively.