

# Bacteriology and Infectious Diseases

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## Molecular study on *Streptococcus pneumoniae* isolated from patients suffering from respiratory tract infection using RAPD-PCR technique

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A total of 53 sputum samples were collected from patients suffering from respiratory tract infections attending different hospitals of Baghdad and Al-Anbar (Ramadi) governorates. From these samples only fifty bacterial isolates were obtained and identified. According to the morphological and cultural characteristics results showed that 14 bacterial isolates (28%) were belong to *Streptococcus spp.*, 26 bacterial isolates (52%) were belong to *Staphylococcus spp.*, four bacterial isolates (8%) were *pseudomonas spp.*, and six isolates (12%) were identified as *Klebsiella spp.* Then further steps have been preceded for identification *Streptococcus* isolates species by biochemical tests, API 20 STEP system and blood hemolysis patterns. Results of full identification showed that only three isolates (21.4%) were identified as *Streptococcus pneumoniae*, five isolates (35.7%) were *Streptococcus pyogenes*, two isolates (14.3%) were *Streptococcus mutans*, two isolates (14.3%) were *Streptococcus sangarius*, one isolate (7.1%) was *Streptococcus faecalis* and one isolate (7.1%) was *Streptococcus agalactiae*. Results of the antimicrobial susceptibility showed that these isolates gave different patterns of sensitivity to different antibiotics. For molecular diagnosis of these *S. pneumoniae* isolates and to study the epidemiology source of these isolates, ten different oligonucleotide primers were used and results showed that the genetic similarity was 67.92% between N8 and N6, while it was found to be 52.27% and 53.76% between N11 and N6 and N11 and N8, respectively. The source of isolation of three isolates confirms these results because the isolates N6 and N8 were isolated from Baghdad governorate while the isolate N11 was isolated from Al-Ramadi city (Al-Anbar province).

### Biography

Maysaa Chasib Al Mohammedawi has completed her PhD from Al Nahrain University and Postdoctoral studies from Deakin University School of Medicine. Before joining for Postdoctoral studies in Deakin University in 2006, she was an Assistance Professor in the Al-Nahrain University and one of academic staff members of Biotechnology Department and Group Leader of Medical Biotechnology research. Currently she has relocated her works as one of SRF-IIIE (US) fellowship into Deakin University with Nanomedicine-Immunology and Molecular Biomedical Research group as Academic Visitor (researcher) and her major field of interest are nanobiotechnology and nanomedicine based drug delivery systems for therapy/diagnosis, biotechnology and molecular biology.

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