

## Serologic and molecular characterization of *Pseudomonas aeruginosa* Jordanian clinical isolates compared with the strains of International Antigenic Typing Scheme

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One hundred clinical isolates of *Pseudomonas aeruginosa* were serologically classified into 7 Jordanian serotypes (labeled JO1–JO7) Odeh, 2002, M.Sc. thesis, University of Jordan). Using the slide agglutination test, 4 of them (JO4, JO5, JO6, and JO7) were serologically matched with the International Antigenic Typing Scheme (IATS) strains (IATS 20, IATS 10, IATS 6, and IATS 11). One serotype (JO1) showed a weak cross-reaction with IATS 1. The remaining 2 local serotypes (JO2 and JO3) did not react with any of the 20 IATS strains. Serologic analysis data showed to a certain extent correlations with molecular data using genetic clustering and similarity indices generated by random amplified polymorphic DNA polymerase chain reaction (RAPD-PCR). Each of the 4 identified local serotypes formed a cluster with its serologically matched IATS strain with relatively high average similarity indices, whereas lower average similarity index was observed between IATS 1 and JO1, in consistence with the weak serologic reaction using the slide agglutination test. On the other hand, the 2 nontypeable serotypes (JO2 and JO3) formed 2 separate clusters that could not be matched to any of the IATS strain. Phenotypic and genotypic analyses suggest that JO2 and JO3, and possibly JO1, can be new serotypes of *P. aeruginosa*. RAPD-PCR was also used to study the relative relatedness among the 20 IATS strains. The IATS strains formed 2 main clusters. Half of the IATS strains formed one main cluster that included IATS 11–20. The remaining IATS strains (8 strains) formed the second main cluster, with the exception of IATS 4 and 9, where each formed a separate cluster.