

عنوان مقاله:

Frequency of cbrA, cbrB, ndvB, and phoBR Genes in Relation to Biofilm Formation in *Pseudomonas aeruginosa* Clinical Isolates

محل انتشار:

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خلاصه مقاله:

Introduction: After *Staphylococcus aureus* and *Escherichia coli*, *Pseudomonas aeruginosa* is the third cause of hospital-acquired infection (HAI). This bacteria's ability to colonize in different environments, especially in hospitals and biofilm formation, has added to its impact as an HAI. The molecular mechanism of biofilm formation is not well understood, but several genes contribute to this phenomenon. This study investigates the frequency of cbrA, cbrB, phoBR, and ndvB genes in biofilm-forming *P. aeruginosa* isolates. **Methods:** Fifty *P. aeruginosa* clinical isolates were collected from various sources such as urine, ulcer, blood, secretions, and trachea in Milad Hospital, Tehran, from ۲۰۱۷ to ۲۰۱۸. Biofilm formation in the isolates was assessed by the microtiter plate assay, and the frequency of cbrA, cbrB, phoBR, and ndvB genes was investigated by PCR. **Results:** Among the ۵۰ isolates, ۴۴% were strong biofilm former, ۳۴% moderate biofilm former, ۱۳% weak biofilm former, and ۱۰% did not form biofilms. PCR revealed a frequency of ۹۴% for the cbrA gene, ۷۸% for cbrB, ۹۶% for ndvB, and ۴۸% for phoBR. The coexistence of all four genes was ۶۸% in strong biofilm former isolates, ۴۱% in moderate biofilm former isolates, ۳۷% in weak biofilm former, and zero in the isolates that formed no biofilm. **Conclusion:** The high frequency of ndvB and cbrA genes and the coexistence of ndvB and cbrB suggest the contribution of these genes in the biofilm formation of *P. aeruginosa*.

کلمات کلیدی:

Pseudomonas aeruginosa, Biofilm, cbrA, cbrB, phoBR, ndvB

لینک ثابت مقاله در پایگاه سیویلیکا:

