

ABSTRAK
HUBUNGAN ANTARA DENSITAS BIOFILM DAN GEN *pslA* PADA
ISOLAT KLINIS *PSEUDOMONAS AERUGINOSA*
DI RSUD DR. SOETOMO SURABAYA

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Latar Belakang : *Pseudomonas aeruginosa* merupakan bakteri Gram-negatif yang ada di banyak tempat, patogen oportunistik, umumnya terkait dengan infeksi nosokomial. Isolat *P. aeruginosa* penghasil biofilm lebih tahan terhadap antibiotik dan respons imun. Eksopolisakarida yang berasal dari gen *psl* memiliki peranan penting dalam pembentukan biofilm *P. aeruginosa*.

Tujuan Penelitian : Membuktikan ada hubungan antara densitas biofilm dengan keberadaan gen *pslA* isolat *P. aeruginosa*.

Metode Penelitian : Isolat klinis *P. aeruginosa* di RSUD Dr. Soetomo Surabaya dilakukan pemeriksaan densitas biofilm dan gen *pslA*. Dilakukan uji Fisher untuk mengetahui hubungan densitas biofilm dan keberadaan gen *pslA*.

Hasil : Diperoleh 31 isolat klinis *P. aeruginosa*. 26 isolat menghasilkan biofilm densitas sedang, 5 isolat menghasilkan biofilm densitas rendah. Dari 26 isolat penghasil biofilm densitas sedang, 21 (80,7%) diantaranya memiliki gen *pslA* dan dari 5 isolat penghasil biofilm densitas rendah, 4 (80%) diantaranya memiliki gen *pslA*.

Kesimpulan : Tidak terdapat hubungan bermakna antara densitas biofilm dan keberadaan gen *pslA*

Kata Kunci : *P. aeruginosa*, densitas biofilm, gen *pslA*

ABSTRACT
**CORRELATION BETWEEN BIOFILM DENSITY AND *pslA* GENE IN
CLINICAL ISOLATES OF *PSEUDOMONAS AERUGINOSA*
IN RSUD DR. SOETOMO SURABAYA**

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Background: *Pseudomonas aeruginosa* is a Gram-negative bacteria that exists in many places, opportunistic pathogens, commonly associated with nosocomial infections. Biofilm-producing *P. aeruginosa* isolates are more resistant to antibiotics and immune responses. Exopolysaccharides derived from the *psl* gene have an important role in the formation of *P. aeruginosa* biofilms.

Objectives: To proof correlation between biofilm density and the presence of *pslA* gene *P. aeruginosa* isolate

Methods: *P. aeruginosa* clinical isolate in Dr. Soetomo Surabaya was examined for biofilm density and *pslA* gene. Fisher's test was performed to determine the relationship of biofilm density and the presence of the *pslA* gene.

Results: Thirty one clinical *P. aeruginosa* isolates were obtained. 26 isolates produced medium density biofilm, 5 isolates produced low density biofilm. Twenty six isolates that produced medium density biofilms, 21 (80.7%) of them had *pslA* genes and from 5 low biofilm producing isolates, 4 (80%) of them had *pslA* genes.

Conclusion: There was no significant relationship between biofilm density and presence of *pslA* gene

Keywords: *P. aeruginosa*, biofilm density, *pslA* gene