Structure Based Virtual Screening and Validation of Potential Quorum Sensing Inhibitors Against LasR in *Pseudomonas aeruginosa*

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Doctor of Philosophy in Biochemistry

By

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80_Recommendation

Recommendations for future studies

- The metabolomic and transcriptomic profiles of *Pseudomonas aeruginosa* biofilms can be integrated and studied to understand the significant regulatory pathways associated with its infections.
- The ability of the screened compounds to retard the biofilm development can be studied in *in vivo* model systems.
- The selected compounds can be used as coating agents to develop multifunctional biocompatible medical implants with improved anti-infective potential and to overcome implant-associated infections.
- The effect of the selected compounds in combination with existing antibiotics can be studied to enhance antibiotic sensitivity in *Pseudomonas aeruginosa*.