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## SYNTHETIC BIOLOGY BIOSENSOR (CYCSENSOR) FOR THE DISCOVERY OF QUORUM SENSING INHIBITORS



### ▶ MORE INFORMATION

#### MEGA-TREND

- **Healthcare**

#### TECHNOLOGY READINESS LEVEL (TRL)

- **TRL 3 (Proof of Concept)**

#### PATENT/ GRANTED NUMBER

- **PI 2016703909**

### ▶ TECHNOLOGY OVERVIEW

The present invention generally relates to a synthetic biology biosensor (Cycsensor) for discovery of quorum sensing inhibitors. Accordingly, the synthetic biology biosensor (Cycsensor) for discovery of quorum sensing inhibitors, the Cycsensor includes: a) *araC* gene encoding for AraC repressor protein for repressing expression of signal synthase gene driven from PBAD promoter, wherein inducible promoter PBAD drives downstream gene expression in presence of arabinose; b) representative *rhII* from *Pseudomonas aeruginosa* for C4-HSL production, wherein the representative *rhII* is driven by PBAD promoter in presence of arabinose; c) representative *rhIR* from *Pseudomonas aeruginosa* for responding to C4-HSL, wherein the

representative rhIR is driven from a constitutive promoter; and d) representative green fluorescent protein gene, gfp, wherein the representative green fluorescent protein gene, gfp is expressed from the responding Prhl promoter which is only functional in presence of RhIR/C4-HSL complex.

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## CONTACT US!

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