Table S1. Comparison of inhibition activities of lutein (Lut) and 3′-dehydrolutein (DHLut) towards PAO1

| PAO1 Virulence | % of inhibition | |
|---|---|---|
| | Lut at 22 µM | DHLut at 22 µM |
| • Biofilm formation | **56 ± 2** | **57 ± 2** |
| • Motilities | | |
| • Swarming | **40 ± 9** | **36 ± 3** |
| • Twitching | **34 ± 5** | **37 ± 5** |
| • Virulence factors production | | |
| • Pyocyanin | **67 ± 4** | **66 ± 6** |
| • Elastase B | **19 ± 2** | *8 ± 3* |
| • Rhamnolipids | **62 ± 5** | **64 ± 5** |
| • QS-related genes expression | | |
| • *lasB* | **60 ± 4** | **61 ± 3** |
| • *rhlA* | **62 ± 2** | **64 ± 4** |
| • *rhlI* | **60 ± 3** | **50 ± 7** |
| • *rhlR* | **64 ± 3** | **68 ± 8** |
| • *lasI* | **56 ± 3** | **53 ± 5** |
| • *lasR* | **60 ± 5** | **61 ± 6** |
| • *vfr* | **16 ± 3** | **12 ± 2** |
| • *gacA* | 2 ± 3 | 5 ± 6 |
| • QS-independent genes expression | | |
| • *aceA* | 1 ± 3 | 2 ± 4 |

Value in bold were considered significant compared to DMSO condition

**Commenté [PD1]:** NON : tester !!!!

Table S2: *Pseudomonas aeruginosa* strains and plasmids used in this study

| Strains or plasmids | Relevant characteristics | References |
|---|---|---|
| Strains | | |
| *P. aeruginosa* PAO1 | Wild-type (strain PAO0001; http://www.pseudomonas.med.ecu.edu/) | |
| *P. aeruginosa* ΔPA1432 | *P. aeruginosa* transposon mutant ID11174; *lasI*::IS*lacZ*/hah;Tet$^R$ | (Jacobs et al., 2003) |
| *P. aeruginosa* ΔPA3476 | *P. aeruginosa* transposon mutant ID32454; *rhlI*::IS*phoA*/hah;Tet$^R$ | (Jacobs et al., 2003) |
| Plasmids | | |
| pLP170 | Broad-host-range *lacZ* transcriptional fusion vector containing an RNase III splice sequence positioned between the multiple cloning site and *lacZ*; Cb$^r$ | (Pesci et al., 1997) |
| pPCS1001 | pLP170-derivative containing P$_{lasR}$-*lacZ* transcriptional fusion | (Pesci et al., 1997) |
| pLPR1 | pLP170-derivative containing P$_{rhlI}$-*lacZ* transcriptional fusion | (Van Delden and Iglewski, 1998) |
| pPCS1002 | pLP170-derivative containing P$_{rhlR}$-*lacZ* transcriptional fusion | (Pesci et al., 1997) |
| pLP170_*gacA* | pLP170- derivative containing P$_{gacA}$-*lacZ* transcriptional fusion | (Rasamiravaka et al., 2015) |
| pLP170_*vfr* | pLP170- derivative containing P$_{vfr}$–*lacZ* transcriptional fusion | (Rasamiravaka et al., 2015) |
| pQF50 | Broad-host-range promoter-less *lacZ* transcriptional fusion vector; Cb$^r$ | (Ishida et al., 2007) |
| p◎01 | pQF50-derivative containing P$_{lasB}$-*lacZ* transcriptional fusion | (Ishida et al., 2007) |
| p◎02 | pQF50-derivative containing P$_{rhlA}$-*lacZ* transcriptional fusion | (Ishida et al., 2007) |
| p◎03 | pQF50-derivative containing P$_{lasI}$-*lacZ* transcriptional fusion | (Ishida et al., 2007) |
| pTB4124 | pQF50-derivative containing P$_{aceA}$-*lacZ* transcriptional fusion | (Kretzschmar et al., 2008) |

Tcr,tetracycline resistance; Cbr carbenicillin resistance