

**Table S1: Strains and plasmids used in this study**

| Strain or plasmid                                                                                                           | Relevant characteristic(s) <sup>a</sup>                                                                                              | Reference/source                 |
|-----------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| <b><i>P. aeruginosa</i></b>                                                                                                 |                                                                                                                                      |                                  |
| Wild type                                                                                                                   | PAO1 wild type                                                                                                                       | Laboratory collection            |
| $\Delta czcA$                                                                                                               | PAO1 $\Delta czcA$                                                                                                                   | (Perron et al., 2004)            |
| $\Delta cadA$                                                                                                               | PAO1 $\Delta cadA$                                                                                                                   | This study                       |
| $\Delta czcA \Delta cadA$                                                                                                   | PAO1 $\Delta czcA \Delta cadA$                                                                                                       | This study                       |
| $\Delta czcD$                                                                                                               | PAO1 $\Delta czcD$                                                                                                                   | This study                       |
| $\Delta yiiP$                                                                                                               | PAO1 $\Delta yiiP$                                                                                                                   | This study                       |
| $\Delta czcD \Delta yiiP$                                                                                                   | PAO1 $\Delta czcD \Delta yiiP$                                                                                                       | This study                       |
| $\Delta czcR$                                                                                                               | PAO1 $\Delta czcR$                                                                                                                   | This study                       |
| $\Delta cadR$                                                                                                               | PAO1 $\Delta cadR$                                                                                                                   | This study                       |
| PT1108                                                                                                                      | PAO1 carrying the constitutive CzcS(V194L) mutation                                                                                  | (Perron et al., 2004)            |
| <b><i>E. coli</i></b>                                                                                                       |                                                                                                                                      |                                  |
| DH5 $\alpha$                                                                                                                | recA1, endA1, hsdR17, deoR, thi-1, supE44, gyrA96, relA1, $\Delta$ (lacZYA-argF), U169( $\phi$ 80dlacZ $\Delta$ M15)                 | (Sambrook, 2001. )               |
| BL21(DE3)                                                                                                                   | E. coli str. B F- ompT gal dcm lon hsdSB(rB-mB-) $\lambda$ (DE3 [lacI lacUV5-T7p07 ind1 sam7 nin5]) [malB+ ]K-12( $\lambda$ S)       | (Studier et al., 1990)           |
| <b>Plasmids</b>                                                                                                             |                                                                                                                                      |                                  |
| pME3087                                                                                                                     | Suicide plasmid, Co1E1 replicon; Tc <sup>r</sup>                                                                                     | (Wenner et al., 2014)            |
| pME6001                                                                                                                     | pME6000 derivative plasmid; Gm <sup>r</sup>                                                                                          | (Blumer et al., 1999)            |
| pME6001- <i>cadA</i>                                                                                                        | pME6000 derivative , carrying the <i>zntA</i> gene under its own promoter; Gm <sup>r</sup>                                           | This study                       |
| pME6001- <i>cadR</i>                                                                                                        | pME6000 derivative , carrying the <i>zntR</i> gene under its own promoter; Gm <sup>r</sup>                                           | This study                       |
| pBBR1- <i>gfp</i>                                                                                                           | Transcriptional <i>gfp</i> fusion cloning vector; Ap <sup>r</sup> , Cb <sup>r</sup>                                                  | (Ouahrani-Bettache et al., 1999) |
| <i>czcCBA ::gfp</i>                                                                                                         | pBBR1 derivative , carrying the <i>czcCBA</i> promoter; Ap <sup>r</sup> , Cb <sup>r</sup>                                            | This study                       |
| <i>cadA ::gfp/ pWT</i>                                                                                                      | pBBR1 derivative , carrying the <i>cadA</i> wild type promoter; Ap <sup>r</sup> , Cb <sup>r</sup>                                    | This study                       |
| p-2                                                                                                                         | pBBR1 derivative, carrying the <i>cadA</i> promoter with a 2 nucleotides deletion in the CadR box; Ap <sup>r</sup> , Cb <sup>r</sup> | This study                       |
| p-IR                                                                                                                        | pBBR1 derivative, carrying the <i>cadA</i> promoter deleted for the CadR box; Ap <sup>r</sup> , Cb <sup>r</sup>                      | This study                       |
| pGex-2T- <i>cadR</i>                                                                                                        | GST-fusion expression plasmid                                                                                                        | This study                       |
| <sup>a</sup> Antibiotic resistance are indicated by r: Ap, ampicillin, Gm, gentamicin; Tc, tetracycline; Cb, carbenicillin. |                                                                                                                                      |                                  |

**References:**

- Blumer, C., Heeb, S., Pessi, G., and Haas, D. (1999). Global GacA-steered control of cyanide and exoprotease production in *Pseudomonas fluorescens* involves specific ribosome binding sites. *Proc Natl Acad Sci U S A* 96(24), 14073-14078. doi: 10.1073/pnas.96.24.14073.
- Ouahrani-Bettache, S., Porte, F., Teyssier, J., Liautard, J.P., and Kohler, S. (1999). pBBR1-GFP: a broad-host-range vector for prokaryotic promoter studies. *Biotechniques* 26(4), 620-622. doi: 10.2144/99264bm05.
- Perron, K., Caille, O., Rossier, C., Van Delden, C., Dumas, J.L., and Kohler, T. (2004). CzcR-CzcS, a two-component system involved in heavy metal and carbapenem resistance in *Pseudomonas aeruginosa*. *J Biol Chem* 279(10), 8761-8768. doi: 10.1074/jbc.M312080200
- M312080200 [pii].
- Sambrook, J., and D. W. Russell. (2001. ). *Molecular cloning: a laboratory manual* 3rd ed. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY.
- Studier, F.W., Rosenberg, A.H., Dunn, J.J., and Dubendorff, J.W. (1990). Use of T7 RNA polymerase to direct expression of cloned genes. *Methods Enzymol* 185, 60-89.

Wenner, N., Maes, A., Cotado-Sampayo, M., and Lapouge, K. (2014). NrsZ: a novel, processed, nitrogen-dependent, small non-coding RNA that regulates *Pseudomonas aeruginosa* PAO1 virulence. *Environ Microbiol* 16(4), 1053-1068. doi: 10.1111/1462-2920.12272.