

## Supplementary materials

Zs. Gelencsér et al: Chromosomal arrangement of AHL-driven quorum sensing circuits in *Pseudomonas*

The distribution and arrangement of *LuxR*, *LuxI*, *rsaL* and *rsaM* gene homologues was surveyed in the Genome and GenBank sections of the NCBI (<http://ncbi.nlm.nih.gov/>) and the UNIPROT database (<http://www.uniprot.org/>). The analysis was based on a core set of proteins for the 4 groups, listed below:

Core protein sets:

LuxR homologues:

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|---|-------------|
| Mesorhizobium loti MAFF303099               | NP_106261.1 |
| Mesorhizobium loti MAFF303099               | NP_106660.1 |
| Mesorhizobium loti MAFF303099               | NP_109411.1 |
| Pseudomonas aeruginosa PAO1                 | NP_250121.1 |
| Pseudomonas aeruginosa PAO1                 | NP_252167.1 |
| Sinorhizobium meliloti 1021                 | NP_385944.1 |
| Ralstonia solanacearum GMI1000              | NP_521406.1 |
| Ralstonia solanacearum GMI1000              | NP_522339.1 |
| Yersinia pestis KIM 10                      | NP_669049.1 |
| Yersinia pestis KIM 10                      | NP_670674.1 |
| Bradyrhizobium japonicum USDA 110           | NP_767702.1 |
| Pseudomonas syringae pv. tomato str. DC3000 | NP_793635.1 |
| Chromobacterium violaceum ATCC 12472        | NP_903760.1 |
| Rhodopseudomonas palustris CGA009           | NP_945674.1 |
| Yersinia pestis biovar Microtus str. 91001  | NP_993605.1 |
| Yersinia pestis biovar Microtus str. 91001  | NP_994736.1 |
| Pectobacterium atrosepticum SCRI1043        | YP_048234.1 |
| Yersinia pseudotuberculosis IP 32953        | YP_071012.1 |
| Yersinia pseudotuberculosis IP 32953        | YP_071752.1 |
| Burkholderia mallei ATCC 23344              | YP_106160.1 |
| Burkholderia mallei ATCC 23344              | YP_105961.1 |
| Burkholderia pseudomallei K96243            | YP_110896.1 |
| Burkholderia pseudomallei K96243            | YP_111575.1 |
| Ruegeria pomeroyi DSS-3                     | YP_165634.1 |
| Ruegeria pomeroyi DSS-3                     | YP_167510.1 |
| Vibrio fischeri ES114                       | YP_206883.1 |
| Pseudomonas syringae pv. syringae B728a     | YP_234708.1 |
| Pseudomonas syringae pv. phaseolicola 1448A | YP_273861.1 |

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| Nitrobacter winogradskyi Nb-255                    | YP_317246.1    |
| Burkholderia pseudomallei 1710b                    | YP_335776.1    |
| Burkholderia pseudomallei 1710b                    | YP_337635.1    |
| Burkholderia sp. 383                               | YP_371810.1    |
| Rhodospirillum rubrum ATCC 11170                   | YP_428476.1    |
| Burkholderia thailandensis E264                    | YP_439002.1    |
| Burkholderia thailandensis E264                    | YP_439706.1    |
| Sodalis glossinidius str. 'morsitans'              | YP_453965.1    |
| Rhizobium etli CFN 42                              | YP_470410.1    |
| Rhizobium etli CFN 42                              | YP_473056.1    |
| Rhodopseudomonas palustris HaA2                    | YP_484040.1    |
| Rhodopseudomonas palustris HaA2                    | YP_486928.1    |
| Jannaschia sp. CCS1                                | YP_508561.1    |
| Saccharophagus degradans 2-40                      | YP_528967.1    |
| Rhodopseudomonas palustris BisB18                  | YP_530593.1    |
| Rhodopseudomonas palustris BisB18                  | YP_531902.1    |
| Burkholderia xenovorans LB400                      | YP_554691.1    |
| Burkholderia xenovorans LB400                      | YP_555670.1    |
| Rhodopseudomonas palustris BisB5                   | YP_567541.1    |
| Rhodopseudomonas palustris BisB5                   | YP_569310.1    |
| Sphingopyxis alaskensis RB2256                     | YP_617565.1    |
| Sphingopyxis alaskensis RB2256                     | YP_617627.1    |
| Burkholderia cenocepacia AU 1054                   | YP_623508.1    |
| Yersinia pestis Antiqua                            | YP_650193.1    |
| Yersinia pestis Antiqua                            | YP_651866.1    |
| Yersinia pestis Nepal516                           | YP_647982.1    |
| Yersinia pestis Nepal516                           | YP_649110.1    |
| Pseudoalteromonas atlantica T6c                    | YP_659944.1    |
| Chelativorans sp. BNC1                             | YP_674864.1    |
| Roseobacter denitrificans OCh 114                  | YP_681951.1    |
| Burkholderia ambifaria AMMD                        | YP_776003.1    |
| Rhodopseudomonas palustris BisA53                  | YP_781245.1    |
| Pseudomonas aeruginosa UCBPP-PA14                  | YP_791822.1    |
| Pseudomonas aeruginosa UCBPP-PA14                  | YP_789670.1    |
| Rhizobium leguminosarum bv. viciae 3841            | YP_768957.1    |
| Burkholderia cenocepacia HI2424                    | YP_838351.1    |
| Aeromonas hydrophila subsp. hydrophila ATCC 7966   | YP_855090.1    |
| Paracoccus denitrificans PD1222                    | YP_914594.1    |
| Acidovorax citrulli AAC00-1                        | YP_972129.1    |
| Burkholderia mallei SAVP1                          | YP_989940.1    |
| Yersinia enterocolitica subsp. enterocolitica 8081 | YP_001005891.1 |

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| Burkholderia mallei NCTC 10229                | YP_001024423.1 |
| Burkholderia mallei NCTC 10229                | YP_001025820.1 |
| Burkholderia pseudomallei 668                 | YP_001062292.1 |
| Burkholderia pseudomallei 668                 | YP_001063209.1 |
| Burkholderia mallei NCTC 10247                | YP_001078154.1 |
| Burkholderia mallei NCTC 10247                | YP_001077903.1 |
| Burkholderia pseudomallei 1106a               | YP_001076161.1 |
| Burkholderia pseudomallei 1106a               | YP_001075258.1 |
| Acinetobacter baumannii ATCC 17978            | YP_001083200.1 |
| Burkholderia vietnamiensis G4                 | YP_001114942.1 |
| Burkholderia vietnamiensis G4                 | YP_001117674.1 |
| Aeromonas salmonicida subsp. salmonicida A449 | YP_001143472.1 |
| Yersinia pestis Pestoides F                   | YP_001161917.1 |
| Yersinia pestis Pestoides F                   | YP_001163230.1 |
| Bradyrhizobium sp. ORS 278                    | YP_001203095.1 |
| Bradyrhizobium sp. BTAi1                      | YP_001220570.1 |
| Bradyrhizobium sp. BTAi1                      | YP_001241092.1 |
| Bradyrhizobium sp. BTAi1                      | YP_001242900.1 |
| Geobacter uraniireducens Rf4                  | YP_001231850.1 |
| Sinorhizobium medicae WSM419                  | YP_001327236.1 |
| Pseudomonas aeruginosa PA7                    | YP_001349253.1 |
| Pseudomonas aeruginosa PA7                    | YP_001347033.1 |
| Yersinia pseudotuberculosis IP 31758          | YP_001399708.1 |
| Yersinia pseudotuberculosis IP 31758          | YP_001400524.1 |
| Serratia proteamaculans 568                   | YP_001476304.1 |
| Dinoroseobacter shibae DFL 12                 | YP_001531661.1 |
| Dinoroseobacter shibae DFL 12                 | YP_001534186.1 |
| Burkholderia multivorans ATCC 17616           | YP_001583946.1 |
| Gluconacetobacter diazotrophicus PAI 5        | YP_001603072.1 |
| Yersinia pestis Angola                        | YP_001606210.1 |
| Yersinia pestis Angola                        | YP_001604810.1 |
| Methylobacterium extorquens PA1               | YP_001641953.1 |
| Acinetobacter baumannii AYE                   | YP_001715477.1 |
| Yersinia pseudotuberculosis YPIII             | YP_001719545.1 |
| Yersinia pseudotuberculosis YPIII             | YP_001720401.1 |
| Shewanella woodyi ATCC 51908                  | YP_001761363.1 |
| Burkholderia cenocepacia MC0-3                | YP_001777917.1 |
| Burkholderia cenocepacia MC0-3                | YP_001779191.1 |
| Methylobacterium sp. 4-46                     | YP_001772212.1 |
| Methylobacterium radiotolerans JCM 2831       | YP_001776815.1 |
| Methylobacterium radiotolerans JCM 2831       | YP_001758389.1 |

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| Methylobacterium radiotolerans JCM 2831      | YP_001783296.1 |
| Burkholderia ambifaria MC40-6                | YP_001811253.1 |
| Beijerinckia indica subsp. indica ATCC 9039  | YP_001832058.1 |
| Acinetobacter baumannii ACICU                | YP_001844797.1 |
| Burkholderia phymatum STM815                 | YP_001860599.1 |
| Yersinia pseudotuberculosis PB1/+            | YP_001873010.1 |
| Yersinia pseudotuberculosis PB1/+            | YP_001873807.1 |
| Burkholderia phytofirmans PsJN               | YP_001888024.1 |
| Burkholderia phytofirmans PsJN               | YP_001893790.1 |
| Erwinia tasmaniensis Et1/99                  | YP_001906896.1 |
| Erwinia tasmaniensis Et1/99                  | YP_001908006.1 |
| Methylobacterium populi BJ001                | YP_001927660.1 |
| Burkholderia multivorans ATCC 17616          | YP_001948918.1 |
| Rhizobium etli CIAT 652                      | YP_001979199.1 |
| Rhizobium etli CIAT 652                      | YP_001985289.1 |
| Rhodopseudomonas palustris TIE-1             | YP_001989359.1 |
| Rhodopseudomonas palustris TIE-1             | YP_001991323.1 |
| Phenylobacterium zucineum HLK1               | YP_002128523.1 |
| Vibrio fischeri MJ11                         | YP_002158591.1 |
| Acidithiobacillus ferrooxidans ATCC 53993    | YP_002220093.1 |
| Burkholderia cenocepacia J2315               | YP_002232873.1 |
| Burkholderia cenocepacia J2315               | YP_002234479.1 |
| Rhizobium leguminosarum bv. trifolii WSM2304 | YP_002282164.1 |
| Aliivibrio salmonicida LFI1238               | YP_002265247.1 |
| Acinetobacter baumannii AB0057               | YP_002317567.1 |
| Acinetobacter baumannii AB307-0294           | YP_002327279.1 |
| Methylocella silvestris BL2                  | YP_002360441.1 |
| Methylobacterium chloromethanicum CM4        | YP_002423670.1 |
| Acidithiobacillus ferrooxidans ATCC 23270    | YP_002426403.1 |
| Pseudomonas aeruginosa LESB58                | YP_002439139.1 |
| Pseudomonas aeruginosa LESB58                | YP_002441567.1 |
| Yersinia pestis CO92                         | YP_002346032.1 |
| Yersinia pestis CO92                         | YP_002347421.1 |
| Methylobacterium nodulans ORS 2060           | YP_002495629.1 |
| Methylobacterium nodulans ORS 2060           | YP_002496262.1 |
| Methylobacterium nodulans ORS 2060           | YP_002497059.1 |
| Geobacter sp. FRC-32                         | YP_002537872.1 |
| Agrobacterium radiobacter K84                | YP_002541325.1 |
| Agrobacterium vitis S4                       | YP_002551488.1 |
| Agrobacterium vitis S4                       | YP_002549361.1 |
| Sinorhizobium fredii NGR234                  | YP_002826207.1 |

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| Burkholderia glumae BGR1                                 | YP_002909041.1 |
| Candidatus Hamiltonella defensa 5AT (Acyrtosiphon pisum) | YP_002923741.1 |
| Edwardsiella ictaluri 93-146                             | YP_002934275.1 |
| Variovorax paradoxus S110                                | YP_002947664.1 |
| Desulfovibrio magneticus RS-1                            | YP_002955225.1 |
| Methylobacterium extorquens AM1                          | YP_002965846.1 |
| Methylobacterium extorquens AM1                          | YP_002966880.1 |
| Rhizobium leguminosarum bv. trifolii WSM1325             | YP_002976727.1 |
| Dickeya zeae Ech1591                                     | YP_003002472.1 |
| Pectobacterium carotovorum subsp. carotovorum PC1        | YP_003019697.1 |
| Methylobacterium extorquens DM4                          | YP_003070967.1 |
| Erwinia pyrifoliae Ep1/96                                | YP_002649216.1 |
| Pectobacterium wasabiae WPP163                           | YP_003261727.1 |
| Halothiobacillus neapolitanus c2                         | YP_003262848.1 |
| Edwardsiella tarda EIB202                                | YP_003296639.1 |
| Dickeya dadantii Ech586                                  | YP_003331714.1 |
| Citrobacter rodentium ICC168                             | YP_003366469.1 |
| Pantoea ananatis LMG 20103                               | YP_003520251.1 |
| Erwinia amylovora CFBP1430                               | YP_003530769.1 |
| Erwinia amylovora ATCC 49946                             | YP_003538485.1 |
| Sphingobium japonicum UT26S                              | YP_003546444.1 |
| Shewanella violacea DSS12                                | YP_003558208.1 |
| Yersinia pestis Z176003                                  | YP_003566925.1 |
| Yersinia pestis Z176003                                  | YP_003568279.1 |
| Rhodobacter capsulatus SB 1003                           | YP_003576500.1 |
| Burkholderia sp. CCGE1002                                | YP_003608086.1 |
| Pantoea vagans C9-1                                      | YP_003729882.1 |
| Acinetobacter sp. DR1                                    | YP_003734010.1 |
| Ralstonia solanacearum PSI07                             | YP_003750859.1 |
| Ralstonia solanacearum PSI07                             | YP_003749681.1 |
| Ralstonia solanacearum CFBP2957                          | YP_003744152.1 |
| Erwinia billingiae Eb661                                 | YP_003740504.1 |
| Erwinia billingiae Eb661                                 | YP_003740953.1 |
| Gallionella capsiferriformans ES-2                       | YP_003847232.1 |
| Dickeya dadantii 3937                                    | YP_003885142.1 |
| Burkholderia sp. CCGE1003                                | YP_003910271.1 |
| Pantoea vagans C9-1                                      | YP_003930459.1 |
| Ketogulonicigenium vulgare Y25                           | YP_003964947.1 |
| Enterobacter cloacae SCF1                                | YP_003941575.1 |
| Rhodomicrobium vannielii ATCC 17100                      | YP_004012994.1 |
| Asticcacaulis excentricus CB 48                          | YP_004088229.1 |

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| Rhodopseudomonas palustris DX-1                | YP_004106680.1 |
| Rhodopseudomonas palustris DX-1                | YP_004106955.1 |
| Rhodopseudomonas palustris DX-1                | YP_004108424.1 |
| Pantoea sp. At-9b                              | YP_004115278.1 |
| Mesorhizobium ciceri biovar biserrulae WSM1271 | YP_004144717.1 |
| Mesorhizobium ciceri biovar biserrulae WSM1271 | YP_004145052.1 |
| Burkholderia sp. CCGE1001                      | YP_004230807.1 |

### LuxI homologues

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| Mesorhizobium loti MAFF303099  | NP_106262.1 |
| Mesorhizobium loti MAFF303099  | NP_106661.1 |
| Mesorhizobium loti MAFF303099  | NP_109412.1 |
| Pseudomonas aeruginosa PAO1  | NP_250123.1 |
| Pseudomonas aeruginosa PAO1  | NP_252166.1 |
| Sinorhizobium meliloti 1021  | NP_385945.1 |
| Ralstonia solanacearum GMI1000   | NP_521405.1 |
| Ralstonia solanacearum GMI1000   | NP_522340.1 |
| Yersinia pestis KIM 10   | NP_669050.1 |
| Yersinia pestis KIM 10   | NP_670673.1 |
| Bradyrhizobium japonicum USDA 110                                      | NP_767703.1 |
| Pseudomonas syringae pv. tomato str. DC3000                            | NP_793636.1 |
| Chromobacterium violaceum ATCC 12472                                   | NP_903761.1 |
| Rhodopseudomonas palustris CGA009                                      | NP_945673.1 |
| Yersinia pestis biovar Microtus str. 91001                             | NP_993604.1 |
| Yersinia pestis biovar Microtus str. 91001                             | NP_994737.1 |
| Pectobacterium atrosepticumSCRI1043                                    | YP_048233.1 |
| Yersinia pseudotuberculosis IP 32953                                   | YP_071011.1 |
| Yersinia pseudotuberculosis IP 32953                                   | YP_071751.1 |
| Burkholderia mallei ATCC 23344   | YP_106161.1 |
| Burkholderia mallei ATCC 23344   | YP_105963.1 |
| Burkholderia pseudomallei K96243                                       | YP_110894.1 |
| Burkholderia pseudomallei K96243                                       | YP_111576.1 |
| Ruegeria pomeroyi DSS-3  | YP_165635.1 |
| Ruegeria pomeroyi DSS-3  | YP_167511.1 |
| 3-oxo-C6-HSL autoinducer synthesis protein LuxI [Vibrio fischeri ES114 | YP_206882.1 |
| Pseudomonas syringae pv. syringae B728a                                | YP_234707.1 |
| Pseudomonas syringae pv. phaseolicola 1448A                            | YP_273860.1 |
| Nitrobacter winogradskyi Nb-255  | YP_317245.1 |
| Burkholderia pseudomallei 1710b  | YP_337633.1 |
| Burkholderia pseudomallei 1710b  | YP_335777.1 |

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| Burkholderia sp. 383                               | YP_371808.1    |
| Rhodospirillum rubrum ATCC 11170                   | YP_428477.1    |
| Burkholderia thailandensis E264                    | YP_439708.1    |
| Burkholderia thailandensis E264                    | YP_439001.1    |
| Sodalis glossinidius str. 'morsitans'              | YP_453964.1    |
| Rhizobium etli CFN 42                              | YP_470411.1    |
| Rhizobium etli CFN 42                              | YP_473057.1    |
| Rhodopseudomonas palustris HaA2                    | YP_484039.1    |
| Rhodopseudomonas palustris HaA2                    | YP_486927.1    |
| Jannaschia sp. CCS1                                | YP_508562.1    |
| Saccharophagus degradans 2-40                      | YP_528965.1    |
| Rhodopseudomonas palustris BisB18                  | YP_530592.1    |
| Rhodopseudomonas palustris BisB18                  | YP_531903.1    |
| Burkholderia xenovorans LB400                      | YP_554693.1    |
| Burkholderia xenovorans LB400                      | YP_555669.1    |
| Rhodopseudomonas palustris BisB5                   | YP_567542.1    |
| Rhodopseudomonas palustris BisB5                   | YP_569311.1    |
| Sphingopyxis alaskensis RB2256                     | YP_617566.1    |
| Sphingopyxis alaskensis RB2256                     | YP_617628.1    |
| Burkholderia cenocepacia AU 1054                   | YP_623506.1    |
| Yersinia pestis Antiqua                            | YP_650194.1    |
| Yersinia pestis Antiqua                            | YP_651865.1    |
| Yersinia pestis Nepal516                           | YP_647981.1    |
| Yersinia pestis Nepal516                           | YP_649109.1    |
| Pseudoalteromonas atlantica T6c                    | YP_659946.1    |
| Chelativorans sp. BNC1                             | YP_674865.1    |
| Roseobacter denitrificans OCh 114                  | YP_681952.1    |
| Burkholderia ambifaria AMMD                        | YP_776005.1    |
| Rhodopseudomonas palustris BisA53                  | YP_781244.1    |
| Pseudomonas aeruginosa UCBPP-PA14                  | YP_791820.1    |
| Pseudomonas aeruginosa UCBPP-PA14                  | YP_789671.1    |
| Rhizobium leguminosarum bv. viciae 3841            | YP_768958.1    |
| Burkholderia cenocepacia HI2424                    | YP_838353.1    |
| Aeromonas hydrophila subsp. hydrophila ATCC 7966   | YP_855089.1    |
| Paracoccus denitrificans PD1222                    | YP_914595.1    |
| Acidovorax citrulli AAC00-1                        | YP_972130.1    |
| Burkholderia mallei SAVP1                          | YP_989942.1    |
| Yersinia enterocolitica subsp. enterocolitica 8081 | YP_001005892.1 |
| Burkholderia mallei NCTC 10229                     | YP_001024425.1 |
| Burkholderia mallei NCTC 10229                     | YP_001025818.1 |
| Burkholderia pseudomallei 668                      | YP_001063210.1 |

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| Burkholderia pseudomallei 668                 | YP_001062290.1 |
| Burkholderia mallei NCTC 10247                | YP_001077901.1 |
| Burkholderia mallei NCTC 10247                | YP_001078152.1 |
| Burkholderia pseudomallei 1106a               | YP_001076162.1 |
| Burkholderia pseudomallei 1106a               | YP_001075256.1 |
| Acinetobacter baumannii ATCC 17978            | YP_001083198.1 |
| Burkholderia vietnamiensis G4                 | YP_001114940.1 |
| Burkholderia vietnamiensis G4                 | YP_001117676.1 |
| Aeromonas salmonicida subsp. salmonicida A449 | YP_001143471.1 |
| Yersinia pestis Pestoides F                   | YP_001161918.1 |
| Yersinia pestis Pestoides F                   | YP_001163229.1 |
| Bradyrhizobium sp. ORS 278                    | YP_001203094.1 |
| Bradyrhizobium sp. BTAi1                      | YP_001220569.1 |
| Bradyrhizobium sp. BTAi1                      | YP_001241094.1 |
| Bradyrhizobium sp. BTAi1                      | YP_001242901.1 |
| Geobacter uraniireducens Rf4                  | YP_001231849.1 |
| Sinorhizobium medicae WSM419                  | YP_001327237.1 |
| Pseudomonas aeruginosa PA7                    | YP_001347034.1 |
| Pseudomonas aeruginosa PA7                    | YP_001349251.1 |
| Yersinia pseudotuberculosis IP 31758          | YP_001399709.1 |
| Yersinia pseudotuberculosis IP 31758          | YP_001400525.1 |
| Serratia proteamaculans 568                   | YP_001476305.1 |
| Dinoroseobacter shibae DFL 12                 | YP_001531662.1 |
| Dinoroseobacter shibae DFL 12                 | YP_001534185.1 |
| Burkholderia multivorans ATCC 17616           | YP_001583944.1 |
| Gluconacetobacter diazotrophicus PAI 5        | YP_001603070.1 |
| Yersinia pestis Angola                        | YP_001604809.1 |
| Yersinia pestis Angola                        | YP_001606209.1 |
| Methylobacterium extorquens PA1               | YP_001641952.1 |
| Acinetobacter baumannii AYE                   | YP_001715479.1 |
| Yersinia pseudotuberculosis YPIII             | YP_001719546.1 |
| Yersinia pseudotuberculosis YPIII             | YP_001720402.1 |
| Shewanella woodyi ATCC 51908                  | YP_001761364.1 |
| Burkholderia cenocepacia MC0-3                | YP_001777918.1 |
| Burkholderia cenocepacia MC0-3                | YP_001779189.1 |
| Methylobacterium sp. 4-46                     | YP_001772211.1 |
| Methylobacterium radiotolerans JCM 2831       | YP_001776814.1 |
| Methylobacterium radiotolerans JCM 2831       | YP_001758390.1 |
| Methylobacterium radiotolerans JCM 2831       | YP_001783295.1 |
| Burkholderia ambifaria MC40-6                 | YP_001811255.1 |
| Beijerinckia indica subsp. indica ATCC 9039   | YP_001832057.1 |

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| Acinetobacter baumannii ACICU                            | YP_001844795.1 |
| Burkholderia phymatum STM815                             | YP_001860597.1 |
| Yersinia pseudotuberculosis PB1/+                        | YP_001873009.1 |
| Yersinia pseudotuberculosis PB1/+                        | YP_001873806.1 |
| Burkholderia phytofirmans PsJN                           | YP_001888022.1 |
| Burkholderia phytofirmans PsJN                           | YP_001893789.1 |
| Erwinia tasmaniensis Et1/99                              | YP_001906897.1 |
| Erwinia tasmaniensis Et1/99                              | YP_001908005.1 |
| Methylobacterium populi BJ001                            | YP_001927659.1 |
| Burkholderia multivorans ATCC 17616                      | YP_001948920.1 |
| Rhizobium etli CIAT 652                                  | YP_001979200.1 |
| Rhizobium etli CIAT 652                                  | YP_001985290.1 |
| Rhodopseudomonas palustris TIE-1                         | YP_001989358.1 |
| Rhodopseudomonas palustris TIE-1                         | YP_001991324.1 |
| Phenylobacterium zucineum HLK1                           | YP_002128524.1 |
| Vibrio fischeri MJ11                                     | YP_002158590.1 |
| Acidithiobacillus ferrooxidans ATCC 53993                | YP_002220095.1 |
| Burkholderia cenocepacia J2315                           | YP_002232872.1 |
| Burkholderia cenocepacia J2315                           | YP_002234481.1 |
| Rhizobium leguminosarum bv. trifolii WSM2304             | YP_002282165.1 |
| Aliivibrio salmonicida LFI1238                           | YP_002265246.1 |
| Acinetobacter baumannii AB0057                           | YP_002317565.1 |
| Acinetobacter baumannii AB307-0294                       | YP_002327281.1 |
| Methylocella silvestris BL2                              | YP_002360442.1 |
| Methylobacterium chloromethanicum CM4                    | YP_002423669.1 |
| Acidithiobacillus ferrooxidans ATCC 23270                | YP_002426405.1 |
| Pseudomonas aeruginosa LESB58                            | YP_002439140.1 |
| Pseudomonas aeruginosa LESB58                            | YP_002441565.1 |
| Yersinia pestis CO92                                     | YP_002346031.1 |
| Yersinia pestis CO92                                     | YP_002347420.1 |
| Methylobacterium nodulans ORS 2060                       | YP_002495630.1 |
| Methylobacterium nodulans ORS 2060                       | YP_002496260.1 |
| Methylobacterium nodulans ORS 2060                       | YP_002497058.1 |
| Geobacter sp. FRC-32                                     | YP_002537871.1 |
| Agrobacterium radiobacter K84                            | YP_002541324.1 |
| Agrobacterium vitis S4                                   | YP_002551489.1 |
| Agrobacterium vitis S4                                   | YP_002549360.1 |
| Sinorhizobium fredii NGR234                              | YP_002826208.1 |
| Burkholderia glumae BGR1                                 | YP_002909043.1 |
| Candidatus Hamiltonella defensa 5AT (Acyrtosiphon pisum) | YP_002923740.1 |
| Edwardsiella ictaluri 93-146                             | YP_002934276.1 |

|   |                |
|---|----------------|
| Variovorax paradoxus S110                         | YP_002947663.1 |
| Desulfovibrio magneticus RS-1                     | YP_002955226.1 |
| Methylobacterium extorquens AM1                   | YP_002965845.1 |
| Methylobacterium extorquens AM1                   | YP_002966879.1 |
| Rhizobium leguminosarum bv. trifolii WSM1325      | YP_002976728.1 |
| Dickeya zeae Ech1591                              | YP_003002473.1 |
| Pectobacterium carotovorum subsp. carotovorum PC1 | YP_003019698.1 |
| Methylobacterium extorquens DM4                   | YP_003070966.1 |
| Erwinia pyrifoliae Ep1/96                         | YP_002649215.1 |
| Pectobacterium wasabiae WPP163                    | YP_003261728.1 |
| Halothiobacillus neapolitanus c2                  | YP_003262850.1 |
| Edwardsiella tarda EIB202                         | YP_003296640.1 |
| Dickeya dadantii Ech586                           | YP_003331715.1 |
| Citrobacter rodentium ICC168                      | YP_003366470.1 |
| Pantoea ananatis LMG 20103                        | YP_003520250.1 |
| Erwinia amylovora CFBP1430                        | YP_003530770.1 |
| Erwinia amylovora ATCC 49946                      | YP_003538486.1 |
| Sphingobium japonicum UT26S                       | YP_003546445.1 |
| Shewanella violacea DSS12                         | YP_003558209.1 |
| Yersinia pestis Z176003                           | YP_003566926.1 |
| Yersinia pestis Z176003                           | YP_003568278.1 |
| Rhodobacter capsulatus SB 1003                    | YP_003576501.1 |
| Burkholderia sp. CCGE1002                         | YP_003608088.1 |
| Pantoea vagans C9-1                               | YP_003729883.1 |
| Acinetobacter sp. DR1                             | YP_003734012.1 |
| Ralstonia solanacearum PSI07                      | YP_003750860.1 |
| Ralstonia solanacearum PSI07                      | YP_003749682.1 |
| Ralstonia solanacearum CFBP2957                   | YP_003744153.1 |
| Erwinia billingiae Eb661                          | YP_003740503.1 |
| Erwinia billingiae Eb661                          | YP_003740954.1 |
| Gallionella capsiferriformans ES-2                | YP_003847234.1 |
| Dickeya dadantii 3937                             | YP_003885141.1 |
| Burkholderia sp. CCGE1003                         | YP_003910269.1 |
| Pantoea vagans C9-1                               | YP_003930460.1 |
| Ketogulonicigenium vulgare Y25                    | YP_003964946.1 |
| Enterobacter cloacae SCF1                         | YP_003941574.1 |
| Rhodomicrobium vannielii ATCC 17100               | YP_004012993.1 |
| Asticcacaulis excentricus CB 48                   | YP_004088230.1 |
| Rhodopseudomonas palustris DX-1                   | YP_004106681.1 |
| Rhodopseudomonas palustris DX-1                   | YP_004106954.1 |
| Rhodopseudomonas palustris DX-1                   | YP_004108425.1 |

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|--|----------------|
| Pantoea sp. At-9b                              | YP_004115279.1 |
| Mesorhizobium ciceri biovar biserrulae WSM1271 | YP_004144716.1 |
| Mesorhizobium ciceri biovar biserrulae WSM1271 | YP_004145051.1 |
| Burkholderia sp. CCGE1001                      | YP_004230809.1 |

#### rsaL homologues

|                                    |                |
|------------------------------------|----------------|
| Pseudomonas aeruginosa PAO1        | NP_250122.1    |
| Burkholderia xenovorans LB400      | YP_554692.1    |
| Pseudomonas aeruginosa UCBPP-PA14  | YP_791821.1    |
| Pseudomonas aeruginosa PA7         | YP_001349252.1 |
| Burkholderia phymatum STM815       | YP_001860598.1 |
| Burkholderia phytofirmans PsJN     | YP_001888023.1 |
| Pseudomonas aeruginosa LESB58      | YP_002441566.1 |
| Laribacter hongkongensis HLHK9     | YP_002794907.1 |
| Burkholderia sp. CCGE1002          | YP_003608087.1 |
| Gallionella capsiferriformans ES-2 | YP_003847233.1 |
| Burkholderia sp. CCGE1003          | YP_003910270.1 |

#### rsaM homologues

|                                 |                |
|---------------------------------|----------------|
| Burkholderia thailandensis E264 | YP_439707.1    |
| Burkholderia ambifaria AMMD     | YP_776004.1    |
| Burkholderia pseudomallei 668   | YP_001062653.1 |
| Burkholderia vietnamiensis G4   | YP_001117675.1 |

The potential homologues were identified using multiple alignment by the CLUSTAL program (accessed via the Wageningen Webportal, <http://www.bioinformatics.nl/tools/clustalw.html>), building of HMM recognizers (program package HMMER 3.0, <http://hmmer.janelia.org/>), and running HMMSEARCH program from the same package on full proteomes or selected protein sequences.

The chromosomal positions were then extracted from the .ptt files of the genomes and gene arrangements containing at least one pair of the four gene types within a distance of 3000 nucleotides were analyzed manually before accepted as a QS circuit and listed in Tables 1-2. As this analysis is not based on experimental validation, the

genes listed here should be considered, at least in principle, as putative homologues of the QS genes. We note that the QS circuits of *Pseudomonas* species are experimentally validated according to the cited sources.