

## Supplementary Table S1 for:

Natural replacement of the vertically inherited *lux-rib* genes of *Photobacterium aquimaris* by horizontally transferred homologsGenBank accession numbers for sequences used in phylogenetic analyses. For *A. fischeri* ES114 gene locus tags from whole genome sequencing project (CP000020) were used.

|  | <i>gyrB</i>                  | <i>pyrH</i> | 16S       | <i>ftsZ</i> | <i>mreB</i> | <i>topA</i> | <i>luxC</i> | <i>luxD</i> | <i>luxA</i> | <i>luxB</i> | <i>luxF</i> | <i>luxE</i> | <i>luxG</i> | <i>ribE</i> | <i>ribB</i> | <i>ribH</i> | <i>ribA</i> |
|--|------------------------------|-------------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <i>Aliivibrio fischeri</i> ES114   | VF_0012                      | VF_1960     | VF_R0001  | VF_2196     | VF_0372     | VF_1051     | VF_A0923    | VF_A0922    | VF_A0921    | VF_A0920    | -           | VF_A0919    | VF_A0918    | -           | -           | -           | -           |
| <i>Photobacterium aquimaris</i> BS1  | JQ229762                     | JQ229763    | JQ229764  | JQ314218    | JQ314216    | JQ314217    | JQ229766    | JQ229766    | JQ229766    | JQ229766    | JQ229766    | JQ229766    | JQ229766    | JQ229766    | JQ229766    | JQ229766    | JQ229766    |
| <i>Photobacterium aquimaris</i> NBRC104633 <sup>T</sup>                        | AB428879                     | AB453684    | NR_041682 | AB453686    | AB453694    | AB453690    | JQ229765    | JQ229765    | JQ229765    | JQ229765    | JQ229765    | JQ229765    | JQ229765    | JQ229765    | JQ229765    | JQ229765    | JQ229765    |
| <i>Photobacterium leiognathi</i> ATCC 25521 <sup>T</sup>                       | AY455879                     | EF380238    | X74686    | DQ907324    | DQ907391    | DQ907463    | M63594      | M63594      | M63594      | M63594      | -           | M63594      | M63594      | L11391      | L11391      | L11391      | L11391      |
| <i>Photobacterium mandapamensis</i> ATCC 27561 <sup>T</sup>                    | AY455883                     | EF415532    | AY341441  | AB453689    | AB453697    | AB453693    | DQ988878    | DQ988878    | DQ988878    | DQ988878    | DQ988878    | DQ988878    | DQ988878    | DQ988878    | DQ988878    | DQ988878    | DQ988878    |
| <i>Photobacterium kishitanii</i> ATCC BAA-1194 <sup>T</sup>                    | AY455877                     | EF415536    | AY341439  | AB453688    | AB453696    | AB453692    | DQ988874    | DQ988874    | DQ988874    | DQ988874    | DQ988874    | DQ988874    | DQ988874    | DQ988874    | DQ988874    | DQ988874    | DQ988874    |
| <i>Photobacterium phosphoreum</i> ATCC 11040 <sup>T</sup>                      | AY455875                     | EF380239    | AY341437  | DQ907326    | DQ907393    | DQ907465    | DQ988873    | DQ988873    | DQ988873    | DQ988873    | DQ988873    | DQ988873    | DQ988873    | -           | DQ988873    | DQ988873    | DQ988873    |
| <i>Aliivibrio fischeri</i> ES114   | VF_A0921, VF_A0920, VF_A0919 |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium aquimaris</i> BS1  | JQ229766                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium aquimaris</i> NBRC104633 <sup>T</sup>                        | JQ229765                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium leiognathi</i> ATCC 25521 <sup>T</sup>                       | M63594                       |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium leiognathi</i> ATCC 25587                                    | AY456750                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium leiognathi</i> lelon.2.1 ( <i>lux-rib</i> <sub>1</sub> )     | EF536333                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium leiognathi</i> lelon.2.1 ( <i>lux-rib</i> <sub>2</sub> )     | EF536334                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium leiognathi</i> lnuch.13.1 ( <i>lux-rib</i> <sub>1</sub> )    | EF536338                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium leiognathi</i> lnuch.13.1 ( <i>lux-rib</i> <sub>2</sub> )    | EF536332                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium leiognathi</i> ppana.1.1                                     | DQ371369                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium leiognathi</i> ppana.3.2                                     | DQ371373                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> ajapo.2.19                                 | DQ371379                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> ajapo.4.5                                  | DQ790852                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> ajapo.4.20 ( <i>lux-rib</i> <sub>1</sub> ) | EU122285                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> ajapo.4.20 ( <i>lux-rib</i> <sub>2</sub> ) | EU122286                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> ajapo.5.1                                  | DQ790857                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> ATCC 27561 <sup>T</sup>                    | DQ988878                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> ATCC 33981                                 | AY341068                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> gjord.1.5                                  | DQ371382                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> PL-721                                     | DQ988877                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> ppana.3.7                                  | DQ371386                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> ppana.3.10                                 | DQ371387                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> seafl.1.1                                  | AY456751                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> svers.1.2                                  | DQ790861                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium mandapamensis</i> svers.9.9                                  | DQ790865                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium kishitanii</i> ATCC BAA-1194 <sup>T</sup>                    | DQ988874                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium kishitanii</i> ckamo.1.1                                     | AY849504                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium kishitanii</i> FS-8.1  | AY849502                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium phosphoreum</i> AK4  | AY849518                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium phosphoreum</i> AK8  | AY849522                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium phosphoreum</i> ATCC 11040 <sup>T</sup>                      | DQ988873                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
| <i>Photobacterium phosphoreum</i> FS-1.1                                       | AY849486                     |             |           |             |             |             |             |             |             |             |             |             |             |             |             |             |             |