

**Table S5: List of *R. solanacearum* traits expressed differently *in vitro* and *in planta***

<b>Previously Known Phenotypes</b>	<b>Expression in culture or <i>in planta</i></b>	<b>Based on <i>in planta</i> RNA seq data</b>
Swimming motility	not regulated by PhcA <sup>1,2</sup> , repressed by PhcA <sup>3</sup>	No change in expression levels of motility genes
EPS	Positively regulated by PhcA <i>in culture</i> <sup>4</sup> , Positively regulated by PhcA <i>in planta</i> <sup>5</sup>	Positively regulated by PhcA
T3SS	Repressed by PhcA in culture <sup>6</sup> , not repressed by PhcA <i>in planta</i> <sup>7,8</sup>	<i>hrcC</i> , <i>hrpB</i> , <i>popA</i> , <i>popB</i> and <i>popC</i> are positively regulated by PhcA
Iron/siderohore	Repressed by PhcA <sup>9</sup>	same
SolIR QS system	Positively regulated by PhcA <sup>10</sup>	same
Cellulase, endo glucanase	Positively regulated <sup>4,11</sup>	same
Ralfuranone synthesis	Positively regulated by PhcA <sup>12</sup>	same
TEK production	Induced by PhcA <sup>4</sup>	same
Twitching motility	<i>pilA</i> expression is repressed PhcA via PehR <sup>13</sup>	not affected
<b>New Phenotypes</b>	<b>Phenotypes known in culture or <i>in planta</i></b>	<b>Based on <i>in planta</i> RNA seq data</b>
T6SS	not known	Positively regulated by PhcA
Nitrogen metabolism	denitrification genes are activated in planta <sup>7</sup>	Repressed by PhcA
Rhs	not known	3 of the rhs genes expression were down regulated
Hemagglutinin	not known	differentially regulated
Chemotaxis	not known	<i>cheY</i> and <i>cheD2</i> downregulated in <i>phcA</i> mutant
Autolysin	not known	not affected
Biofilm formation	reduced in <i>phcA</i> mutant	<i>phcA</i> mutant forms "Mat" like structure near the point of infection
Sulfur metabolism	Not known	Repressed by PhcA
Carbon metabolism	Not known	Pyruvate metabolism and TCA cycle upregulated

## References

1. **Brumbley SM, Denny TP.** 1990. Cloning of wild-type *Pseudomonas solanacearum* *phcA*, a gene that when mutated alters expression of multiple traits that contribute to virulence. *J Bacteriol.*; **172**:5677-85.
2. **Tans-Kersten J, Brown D, Allen C.** 2004. Swimming motility, a virulence trait of *Ralstonia solanacearum*, is regulated by FlhDC and the plant host environment. *Mol Plant Microbe Interact.* **17**:686-95.
3. **Clough SJ, Flavier AB, Schell MA, Denny TP.** 1997. Differential Expression of Virulence Genes and motility in *Ralstonia* (*Pseudomonas*) *solanacearum* during exponential growth. *Appl Environ Microbiol.* **63**:844-50.
4. **Brumbley SM, Carney BF, Denny TP.** 1993. Phenotype conversion in *Pseudomonas solanacearum* due to spontaneous inactivation of PhcA, a putative LysR transcriptional regulator. *J Bacteriol.* **175**:5477-87. .
5. **McGarvey JA, Denny TP, Schell MA.** 1999. Spatial-Temporal and quantitative analysis of Growth and EPS I Production by *Ralstonia solanacearum* in resistant and susceptible tomato cultivars. *Phytopathology.* **89**:1233-9.
6. **Genin S, Brito B, Denny TP, Boucher C.** 2005. Control of the *Ralstonia solanacearum* Type III secretion system (Hrp) genes by the global virulence regulator PhcA. *FEBS Lett.* **579**:2077-81.
7. **Jacobs JM, Babujee L, Meng F, Milling A, Allen C.** 2012. The *in planta* transcriptome of *Ralstonia solanacearum*: conserved physiological and virulence strategies during bacterial wilt of tomato. *MBio.* **3**.
8. **Monteiro F, Genin S, vanDijk I, Valls M.** 2012. A luminescent reporter evidences active expression of *Ralstonia solanacearum* type III secretion system genes throughout plant infection. *Microbiology.* **158**:2107-16.
9. **Bhatt G, Denny TP.** 2004. *Ralstonia solanacearum* iron scavenging by the siderophore staphyloferrin B is controlled by PhcA, the global virulence regulator. *J Bacteriol.* **186**:7896-904.
10. **Flavier AB, Schell MA, Denny TP.** 1998. An RpoS (sigmaS) homologue regulates acylhomoserine lactone-dependent autoinduction in *Ralstonia solanacearum*. *Mol Microbiol.* **28**:475-86.
11. **Schell MA, Denny TP, Huang J.** 1994. Extracellular virulence factors of *Pseudomonas solanacearum*: role in disease and regulation of expression. In *Molecular Mechanisms of Bacterial Virulence*, ed. C Kado, J Crosa, pp. 311–324. Dordrecht: Kluwer
12. **Schneider P, Jacobs JM, Neres J, Aldrich CA, Allen C, Nett M, et al.** 2009. The global virulence regulators VsrAD and PhcA control secondary metabolism in the plant pathogen *Ralstonia solanacearum*. *ChemBioChem.* **10**.
13. **Kang Y, Saile E, Schell MA, Denny TP.** 1999. Quantitative immunofluorescence of regulated eps gene expression in single cells of *Ralstonia solanacearum*. *Appl Environ Microbiol.* **65**:2356-62.