

## Supplementary Material

### Genomic Characterization and Phytostimulative Effect of a Novel *Serratia* species

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Table S1. Overview of the production of biocontrol-related secondary metabolites by model *S. fonticola* AGBY19 strain depending on sequence analysis. \*Astericks shows the results confirmed with in vitro assays.

Metabolite	Production
Glucanases*	+
Chitinases*	+
Proteases	+
Siderophores	+
IAA*	+

Table S2. The growth (in vitro) of *P. infestans* in dual antagonistic petri assay (cm), compared to control.

\*Astericks show statistically differences ( $P < 0.05$ ) according to Duncan test in same row between treatments ( $SD$  = standard deviation, DAI = days after inoculation).

Time	<i>P. infestans</i> (control)	AGBY19 inoculated	Mycelium growth %	Inhibiton effect %
1. dai	2.4 ± 0.07*	1.80 ± 0.21	20	80.00
2. dai	2.7 ± 0.07*	2.22 ± 0.20	24.66	75.34
4. dai	6.1 ± 0.27*	2.40 ± 0.21	26.66	73.34
7. dai	9.0 ± 0.15*	2.40 ± 0.41	26.66	73.34
11. dai	9.0 ± 0.16*	2.42 ± 0.43	26.88	73.12

Table S3. The statistical analysis on tomato plants between AGBY19 treated and control groups. \*Asterics show statistically difference according to Duncan analysis in same row ( $P < 0.05$ ) between treatments ( $SD$  = standard deviation).

Measured properties	AGBY19 ± sd	Control ± sd
Plant height (cm/plant)	47.6 ± 3.09*	36.5 ± 3.05
Root length (cm/plant)	12.2 ± 0.73*	9.0 ± 0.71

Table S4. Antibiotic resistance genes identified in *Serratia fonticola* AGBY19.

Gene	Product	Classification	Subject Coverage	Query Coverage	Percentage Identity	E-value
rpoB	DNA-directed RNA polymerase beta subunit	antibiotic resistant gene variant or mutant, rifampin resistance gene	99	99	95	0.0
mdtG	Multidrug resistance protein	efflux pump conferring antibiotic resistance	96	95	81	1e-192
mfd	Transcription-repair coupling factor	antibiotic target protection protein, fluoroquinolone resistance gene	97	97	83	0.0
parC	DNA topoisomerase IV subunit A	fluoroquinolone resistance gene	99	98	84	0.0
parE	DNA topoisomerase IV subunit B	antibiotic resistant gene variant or mutant, fluoroquinolone resistance gene	99	99	91	0.0
cpxA	Copper sensory histidine kinase	efflux pump conferring antibiotic resistance, gene modulating antibiotic efflux	99	99	84	1e-227
gyrA	DNA gyrase subunit A	antibiotic resistant gene variant or mutant, fluoroquinolone resistance gene	96	96	91	0.0
emrR	Multidrug resistance regulator	efflux pump conferring antibiotic resistance, gene modulating antibiotic efflux	94	95	81	6e-75
mdtK	Uncharacterized transporter YeeO	efflux pump conferring antibiotic resistance	98	96	82	1e-232
mdtB	Multidrug efflux system MdtABC-TolC, inner-membrane proton/drug antiporter	efflux pump conferring antibiotic resistance	98	98	82	0.0
GlpT	Glycerol-3-phosphate transporter	antibiotic resistant gene variant or mutant, fosfomycin resistance gene	97	97	91	1e-248
emrB	Multidrug efflux system EmrAB-OMF, inner-membrane proton/drug antiporter	efflux pump conferring antibiotic resistance	99	99	85	1e-265
H-NS	DNA-binding protein H-NS	efflux pump conferring antibiotic resistance, gene modulating antibiotic efflux	97	99	86	1e-59
cysB	Cys regulon transcriptional activator	aminocoumarin resistance gene	100	100	91	1e-172
alaS	Alanyl-tRNA synthetase	aminocoumarin resistance gene	99	100	84	0.0
acrD	Aminoglycosides efflux system AcrAD-TolC, inner-membrane proton/drug antiporter	efflux pump conferring antibiotic resistance	99	99	80	0.0
PhoP	Transcriptional regulatory protein PhoP	multidrug resistance gene	98	98	85	1e-105
msbA	Lipid A export permease/ATP-binding protein	efflux pump conferring antibiotic resistance	100	100	86	1e-286
murA	UDP-N-acetylglucosamine 1-carboxyvinyltransferase	antibiotic resistant gene variant or mutant, fosfomycin resistance gene	100	100	89	1e-216
bacA	Undecaprenyl-diphosphatase	gene conferring antibiotic resistance via molecular bypass, peptide antibiotic resistance gene	99	99	83	1e-127
acrB	Multidrug efflux system AcrAB-TolC, inner-membrane proton/drug antiporter AcrB	efflux pump conferring antibiotic resistance	99	99	86	0.0
cpxR	Copper-sensing two-component system response regulator	efflux pump conferring antibiotic resistance, gene modulating antibiotic efflux	99	99	91	1e-118
CRP	Cyclic AMP receptor protein	efflux pump conferring antibiotic resistance, gene modulating antibiotic efflux	100	100	99	1e-116



Figurer S1

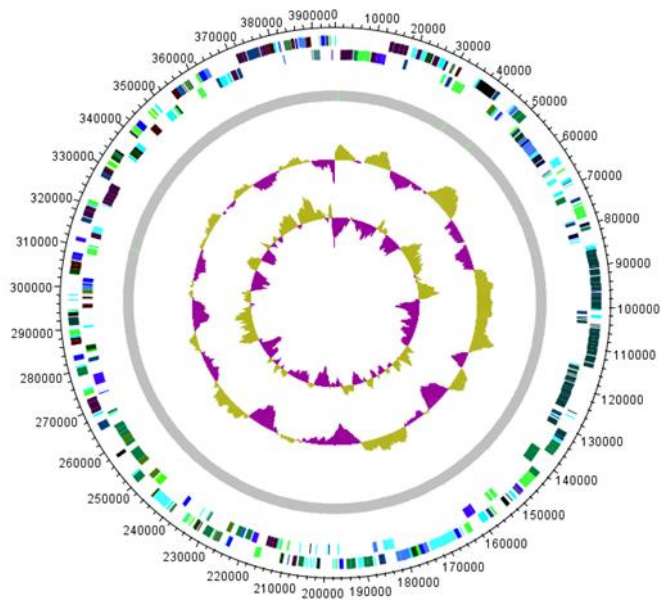


Figure S2

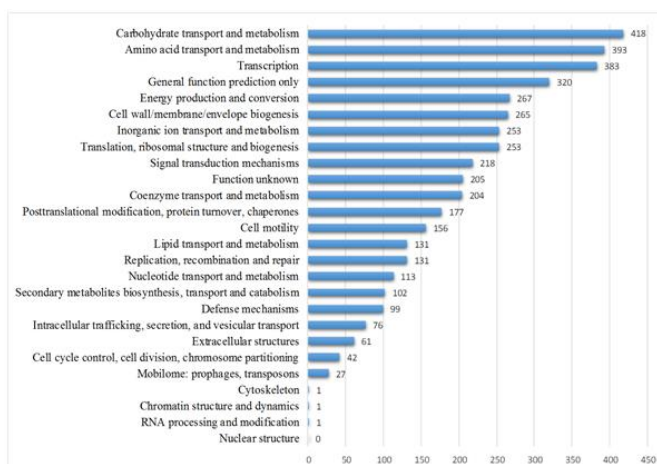


Figure S3