Supplementary Tables and Figure

Table S1. Concentration of free amino acids in *E. coli* BL21 cell extracts

Table S2. Results from search of bacterial VFT signature in the 500 hits of Blastp. Altered signatures identified in 33 proteins are shown in bold

Fig. S1. Effect of Tyr275 mutations on aggressiveness of *A. tumefaciens*. Virulence symptoms (number of emerging tumors) induced by the constructed strains *atu2422*(*atu2422*), *atu2422*(*6000*), *atu2422*(*atu2422-Y275K*), *atu2422*(*atu2422-Y275A*) and *atu2422*(*atu2422-Y275F*) were measured in tomato and tobacco plants. Bacterial strains showing statistical differences (Kruskal-wallis test; α=0.05) in their aggressiveness categories are noted by different letters.

Fig. S2. Extended relation tree of Atu2422 related proteins. Extended view of the relation tree of the analyzed 386 proteins from 155 different species retrieved after a Blastp Search using Atu2422 as query. The branches are collapsed when related proteins are from species of a same Genus (i.e. *Pseudomonas*, *Burkholderia*, *Agrobacterium*). The percentage of replicate trees in which the associated taxa clustered together in the bootstrap test (2000 replicates) is shown next to the branches. Note the particular case of *Rhodospirillum centenum* strain SW, in which two sequences showed Phe or Leu at position 77.

Table S1: Concentration of free amino acids in *E. coli* BL21 cell extracts

	Amino acids in cell extracts of *E.coli* BL21	
	nmol/µL	**%**
Leu	1.24	18.5
Lys	1.04	15.6
Val	0.75	11.3
Ala	0.72	10.8
Phe	0.55	8.2
Arg	0.54	8
Ile	0.49	7.3
Gly	0.31	4.6
Met	0.23	3.5
His	0.17	2.5
Asp	0.17	2.5
Pro	0.14	2
Glu	0.12	1.8
Tyr	0.11	1.7
Ser	0.05	0.8
Thr	0.05	0.8
Orn	0.03	0.45
GABA	0.01	0.18
Cys	-	-
Gln	-	-
Asn	-	-
Trp	-	-

Table S2. Results from search of bacterial VFT signature in the 500 hits of Blastp. Altered signatures identified in 33 proteins are shown in bold.

Pattern	Nb of retrieved sequences
[S]-x(22)-[T]-x(13)-[R]-x(4)-[D]-x(2)-[Q]-x(25)-[YG]-x(74)-[D]	144
[S]-x(22)-[T]-x(13)-[R]-x(4)-[D]-x(2)-[Q]-x(25)-[YG]-x(74)-[E]	154
[S]-x(22)-[T]-x(14)-[R]-x(4)-[D]-x(2)-[Q]-x(25)-[YG]-x(74)-[D]	4
[S]-x(22)-[T]-x(14)-[R]-x(4)-[D]-x(2)-[Q]-x(25)-[YG]-x(74)-[E]	31
[T]-x(22)-[T]-x(13)-[R]-x(4)-[D]-x(2)-[Q]-x(25)-[YG]-x(74)-[D]	0
[T]-x(22)-[T]-x(13)-[R]-x(4)-[D]-x(2)-[Q]-x(25)-[YG]-x(74)-[E]	13
[S]-x(22)-[T]-x(13)-[R]-x(4)-[D]-x(2)-[Q]-x(24)-[YG]-x(74)-[D]	25
[S]-x(22)-[T]-x(13)-[R]-x(4)-[D]-x(2)-[Q]-x(24)-[YG]-x(74)-[E]	4
[S]-x(22)-[V]-x(13)-[R]-x(4)-[D]-x(2)-[Q]-x(24)-[AS]-x(74)-[S]	5
[S]-x(21)-[T]-x(13)-[R]-x(4)-[D]-x(2)-[Q]-x(25)-[YG]-x(74)-[E]	29
[S]-x(22)-[T]-x(13)-[M]-x(4)-[D]-x(2)-[N]-x(25)-[FG]-x(74)-[G]	28
Total	437

Figure S1.

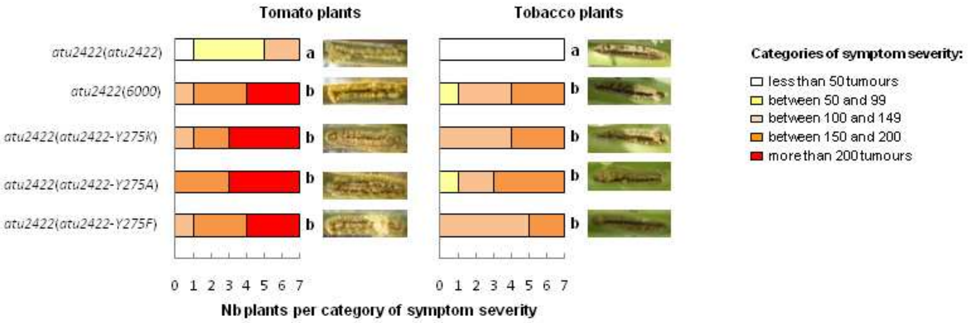
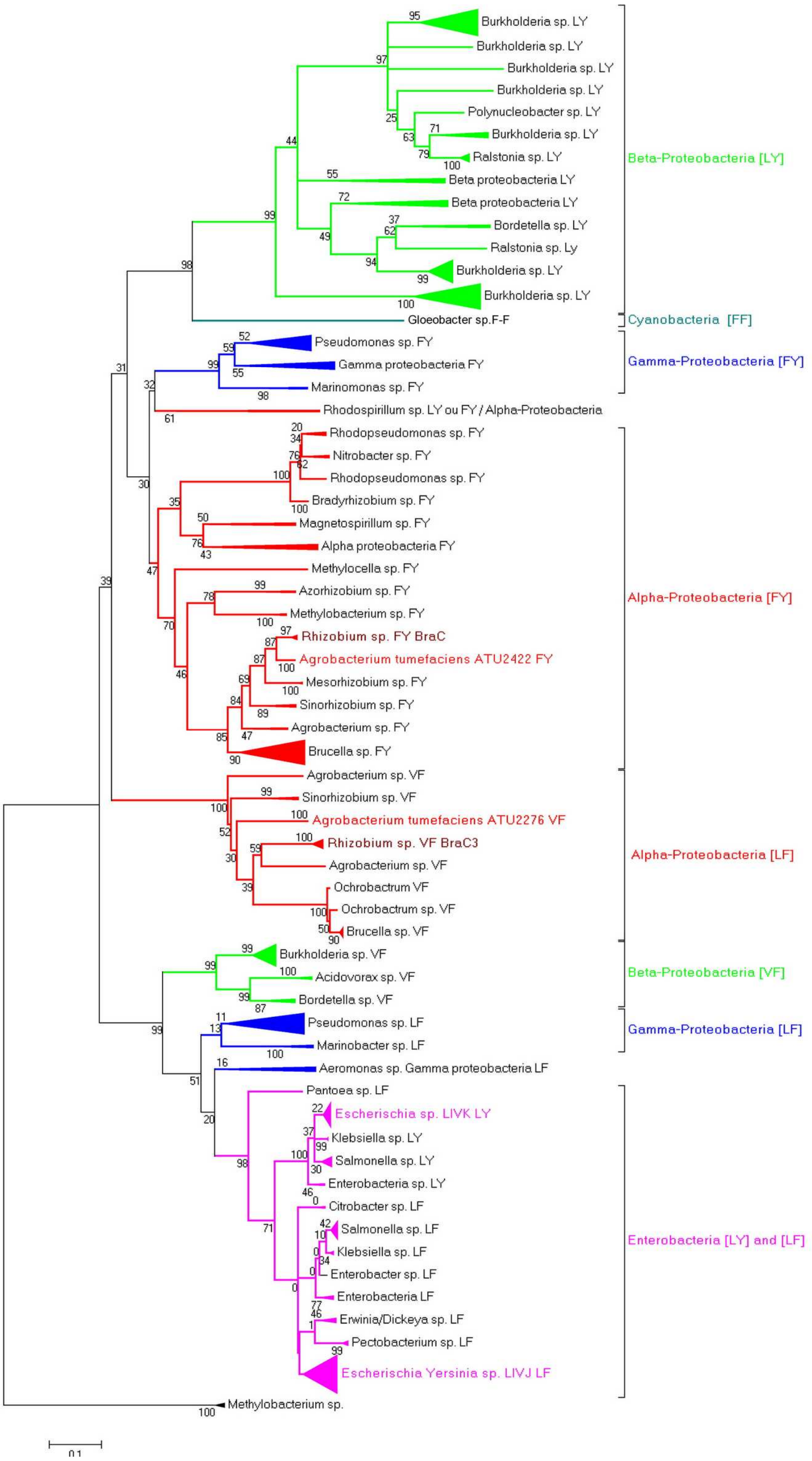

Tomato plants
Tobacco plants
atu2422(atu2422)
atu2422(6000)
atu2422(atu2422-Y275K)
atu2422(atu2422-Y275A)
atu2422(atu2422-Y275F)
a
b
b
b
b
a
b
b
b
b
0 1 2 3 4 5 6 7
0 1 2 3 4 5 6 7
Nb plants per category of symptom severity
Categories of symptom severity:
less than 50 tumours
between 50 and 99
between 100 and 149
between 150 and 200
more than 200 tumours

Figure S2.


Burkholderia sp. LY
Burkholderia sp. LY
Burkholderia sp. LY
Burkholderia sp. LY
Polynucleobacter sp. LY
Burkholderia sp. LY
Ralstonia sp. LY
Beta proteobacteria LY
Beta proteobacteria LY
Bordetella sp. LY
Ralstonia sp. Ly
Burkholderia sp. LY
Burkholderia sp. LY
Beta-Proteobacteria [LY]
Gloeobacter sp.F-F
Cyanobacteria [FF]
Pseudomonas sp. FY
Gamma proteobacteria FY
Marinomonas sp. FY
Gamma-Proteobacteria [FY]
Rhodospirillum sp. LY ou FY / Alpha-Proteobacteria
Rhodopseudomonas sp. FY
Nitrobacter sp. FY
Rhodopseudomonas sp. FY
Bradyrhizobium sp. FY
Magnetospirillum sp. FY
Alpha proteobacteria FY
Methylocella sp. FY
Azorhizobium sp. FY
Methylobacterium sp. FY
Rhizobium sp. FY BraC
Agrobacterium tumefaciens ATU2422 FY
Mesorhizobium sp. FY
Sinorhizobium sp. FY
Agrobacterium sp. FY
Brucella sp. FY
Alpha-Proteobacteria [FY]
Agrobacterium sp. VF
Sinorhizobium sp. VF
Agrobacterium tumefaciens ATU2276 VF
Rhizobium sp. VF BraC3
Agrobacterium sp. VF
Ochrobactrum VF
Ochrobactrum sp. VF
Brucella sp. VF
Alpha-Proteobacteria [LF]
Burkholderia sp. VF
Acidovorax sp. VF
Bordetella sp. VF
Beta-Proteobacteria [VF]
Pseudomonas sp. LF
Marinobacter sp. LF
Gamma-Proteobacteria [LF]
Aeromonas sp. Gamma proteobacteria LF
Pantoea sp. LF
Escherischia sp. LIVK LY
Klebsiella sp. LY
Salmonella sp. LY
Enterobacteria sp. LY
Citrobacter sp. LF
Salmonella sp. LF
Klebsiella sp. LF
Enterobacter sp. LF
Enterobacteria LF
Erwinia/Dickeya sp. LF
Pectobacterium sp. LF
Escherischia Yersinia sp. LIVJ LF
Enterobacteria [LY] and [LF]
Methylobacterium sp.
0.1