***New Phytologist* Supporting Information File 6**

Article title**: Diverse mechanisms of resistance to *Pseudomonas syringae* in a thousand natural accessions of *Arabidopsis thaliana***

Authors: André C. Velásquez, Matthew Oney, Bethany Huot, Shu Xu and Sheng Yang He

Article acceptance date: 7 February 2017

The following Supporting Information is available for this article:

Table S1. Strains used in this study.
Table S2. Primers used in this study.
Table S3. *Arabidopsis thaliana* accessions evaluated for resistance to *Pseudomonas syringae* pv. *tomato* (*Pst*) DC3000.
Table S4. χ^2 goodness-of-fit test between the observed and expected segregation for the resistance to *Pseudomonas syringae* pv. *tomato* DC3000 in F_2 populations derived from crosses between resistant and susceptible accessions.
Table S5. List of *Pseudomonas syringae* pv. *tomato* DC3000 effectors and the effector gene cluster to which they belong.
Table S6. Search for the effector responsible for the accelerated cell death response in *Pseudomonas syringae* pv. *tomato* (*Pst*) DC3000-resistant accessions.
Table S7. HopAM1 may be responsible for the accelerated cell death observed in accession Xan-5.
Table S8. Arabidopsis accessions and the mechanism of resistance against *Pseudomonas syringae* pv. *tomato* identified in this study.
Methods S1. Crosses between Arabidopsis accessions.

Methods S2. Next-generation sequencing and SHOREmap mapping of resistance loci.

Methods S3. Statistical analyses.

Notes S1. References.

SUPPORTING INFORMATION TABLES

Table S1. Strains used in this study.

Name	Comments	Reference
E. coli DH5α pUCP19::*avrRpt2*	*E. coli* strain carrying pUCP19::*avrRpt2*, which is expressed from its endogenous promoter.	Zwiesler-Vollick *et al.* (2002)
E. coli S17-1 pK18mobsacB::Δ*hopAM1-1*	*E. coli* strain carrying sucrose-counter-selection plasmid pK18mobsacB with the *hopAM1-1* deletion construct.	Cunnac *et al.* (2011)
Pseudomonas syringae pv. *tomato* DC3000	Rifampicin-resistant derivative from *Pst* strain DC52.	
Pst DC3000 pDSK600::*avrPphB*	*Pst* DC3000 expressing *avrPphB* effector from plasmid pPPY3031 (pDSK600::*avrPphB*). *AvrPphB* is expressed under the control of a triple *lacUV5* promoter.	Puri *et al.* (1997)
Pseudomonas syringae pv. tomato DC3000 Δ*28E*	CUCPB5585. *Pst* DC3000 strain with 28 of its effectors deleted (*hopK1*, *hopY1*, *hopU1*, *hopF2*, *hopH1*, *hopC1*, *hopD1*, *hopQ1-1*, *hopR1*, *hopAM1-1*, *hopN1*, *hopAA1-1*, *hopM1*, *avrE*, *hopB1*, *hopAF1*, *avrPtoB*, *avrPto*, *hopE1*, *hopAA1-2*, *hopV1*, *hopAO1*, *hopG1*, *hopI1*, *hopA1*, *hopAM1-2*, *hopX1*, *hopO1-1*, and *hopT1-1*). Genes *hopAM1-1* and *hopAM1-2* have identical sequences and as such are only counted once.	Cunnac *et al.* (2011)
Pst DC3000 Δ*28E* pBBR1MCS-2-GW::*hopAM1-HA*	*Pst* DC3000 strain with 28 of its effectors deleted and expressing *hopAM1* from its endogenous promoter. Effector carries a C-terminal HA tag.	Xin *et al.* (2016)

Name	Comments	Reference
Pst DC3000 Δ*28E* pBBR1MCS-2-GW::*hopK1-HA*	*Pst* DC3000 strain with 28 of its effectors deleted and expressing *hopK1* from its endogenous promoter. Effector carries a C-terminal HA tag.	Xin *et al.* (2016)
Pst DC3000 Δ*28E* pBBR1MCS-2-GW::*hopY1-HA*	*Pst* DC3000 strain with 28 of its effectors deleted and expressing *hopY1* from its endogenous promoter. Effector carries a C-terminal HA tag.	Xin *et al.* (2016)
Pst DC3000 Δ*28E* pBBR1MCS-2-GW::*hrpK1-hopB1-HA*	*Pst* DC3000 strain with 28 of its effectors deleted and expressing *hrpK1-hopB1* as an operon from their endogenous promoter. HopB1 carries a C-terminal HA tag.	Xin *et al.* (2016)
Pst DC3000 Δ*28E* pBBR1MCS-2-GW::*hopAF1-HA*	*Pst* DC3000 strain with 28 of its effectors deleted and expressing *hopAF1* from its endogenous promoter. Effector carries a C-terminal HA tag.	Xin *et al.* (2016)
Pst DC3000 Δ*28E* pBBR1MCS-2-GW::*hopE1-HA*	*Pst* DC3000 strain with 28 of its effectors deleted and expressing *hopE1* from its endogenous promoter. Effector carries a C-terminal HA tag.	Xin *et al.* (2016)
Pst DC3000 Δ*28E* pBBR1MCS-2-GW::*hopI1-HA*	*Pst* DC3000 strain with 28 of its effectors deleted and expressing *hopI1* from its endogenous promoter. Effector carries a C-terminal HA tag.	Xin *et al.* (2016)
Pst DC3000 Δ*28E* pBBR1MCS-2-GW::*shcA-hopA1-HA*	*Pst* DC3000 strain with 28 of its effectors deleted and expressing *shcA-hopA1* as an operon from their endogenous promoter. HopA1 carries a C-terminal HA tag.	Xin *et al.* (2016)

Name	Comments	Reference
Pst DC3000 ∆*28E* pUCP19::*avrRpt2*	*Pst* DC3000 strain with 28 of its effectors deleted and expressing *avrRpt2* from its endogenous promoter. Use 400 µg ml^{-1} of ampicillin for plasmid selection in solid media.	This study
Pseudomonas syringae pv. *tomato* DC3000 ∆*avrPto* ∆*avrPtoB*	*Pst* DC3000 strain that has both *avrPto* and *avrPtoB* genes deleted.	Lin & Martin (2005)
Pseudomonas syringae pv. *tomato* DC3000 ∆*avrPto*	*Pst* DC3000 strain that has the *avrPto* effector gene deleted.	Ronald *et al.* (1992)
Pseudomonas syringae pv. *tomato* DC3000 ∆*avrPtoB*	*Pst* DC3000 strain that has the *avrPtoB* (*hopAB2*) effector gene deleted.	From the Collmer lab
Pseudomonas syringae pv. *tomato* DC3000 ∆*CEL*	CUCPB5115. *Pst* DC3000 strain with the Conserved effector locus (*CEL*) deleted. Four effectors (*hopN1*, *hopAA1-1*, *hopM1*, and *avrE*) are encompassed in this locus.	Alfano *et al.* (2000)
Pseudomonas syringae pv. *tomato* DC3000 ∆*I*∆*II*∆*IV*∆*IX*∆*X*	CUCPB5459. *Pst* DC3000 strain with five clusters of effectors deleted; a total of 15 effectors are deleted. Cluster I encompasses *hopU1* and *hopF2* effectors; cluster II encompasses *hopH1* and *hopC1*; cluster IV encompasses *hopD1*, *hopQ1-1*, and *hopR1*; cluster IX encompasses *hopAA1-2*, *hopV1*, *hopAO1*, and *hopG1*; and cluster X encompasses *hopAM1-2*, *hopX1*, *hopO1-1*, and *hopT1-1* effectors.	Kvitko *et al.* (2009)

Name	Comments	Reference
Pseudomonas syringae pv. *tomato* DC3001	*Pst* DC3001 is a strain with a spontaneous deletion of an approximate 10-kb fragment that includes *hopAM1-2* from plasmid A. Strain obtained from Dr. Roger Innes.	Landgraf *et al.* (2006)
Pseudomonas syringae pv. *tomato* DC3001 Δ*hopAM1-1*	*Pst* strain that has both *hopAM1-1* and *hopAM1-2* genes deleted. *Pst* DC3001 is a strain with a spontaneous deletion of an approximate 10-kb fragment which includes *hopAM1-2* from plasmid A.	This study
Pseudomonas syringae pv. *tomato* DC3000 Δ*hrcC*	CUCPB5112. Non-pathogenic *Pst* DC3000 strain without a functional type III secretion system.	Wei *et al.* (2000)
Pseudomonas cannabina pv. *alisalensis* ES4326R	Rifampicin-resistant *Pcal* ES4326 strain (a.k.a. *Pseudomonas syringae* pv. *maculicola* ES4326)	

Table S2. Primers used in this study.

Name	Sequence 5' ⟶ 3'	Comments	Reference
nga139-F	AGGGTTTCGTTTCACTATCCAG	Microsatellite marker; $(AG)_{29}$ on *A. thaliana* chromosome IV.	Berendzen *et al*. (2005)
nga139-R	TGAGAGCTACCAGATCCGATG	Microsatellite marker; $(AG)_{29}$ on *A. thaliana* chromosome IV. Aligns in the reverse orientation.	Berendzen *et al.* (2005)
nga151a-F	ATCTCATACTGACCCATATGTTCC	Microsatellite marker; $(CT)_{31}$ on *A. thaliana* chromosome V (29.62 cM).	Berendzen *et al.* (2005)
nga151a-R	ATTGTACAGTCTAAAAGCGAGAG	Microsatellite marker; $(CT)_{31}$ on *A. thaliana* chromosome V (29.62 cM). Aligns in the reverse orientation.	Berendzen *et al.* (2005)
nga172-F	AGCTGCTTCCTTATAGCGTCC	Microsatellite marker; $(GA)_{29}$ on *A. thaliana* chromosome III (6.91 cM).	Berendzen *et al.* (2005)
nga172-R	(C)CATCCGAATGCCATTGTTC	Microsatellite marker; $(GA)_{29}$ on *A. thaliana* chromosome III (6.91 cM). Aligns in the reverse orientation.	Berendzen *et al.* (2005)
P1	CTGGAGAGCCCTTAAAAACAG	Anneals to 1624 - 1644 bp of pDC3000A. Use simultaneously in one PCR reaction with P5 and T1. Expected amplicon size is 538 bp for *Pst* DC3000 (T1 + P5) or 269 bp for *Pst* DC3001 (P1 + P5).	Landgraf *et al.* (2006)
P2615	GTCAACGGCCAGGAGCCCTATA	Anneals 1114586 - 1114607 bp of *Pst* DC3000 (and to **more than 30 other sites** in the genome of *Pst* DC3000). Expected amplicon size is 2955 bp for *Pst* DC3000 or 2133 bp for *Pst* DC3001 (Δ*hopAM1-2*) with P2616.	Cunnac *et al.* (2011)

Name	Sequence 5' ⟶ 3'	Comments	Reference
P2616	CCGCAAGCGTTCAAG GGTCT	Anneals 1117521 - 1117540 bp of *Pst* DC3000 in the reverse orientation.	Cunnac *et al.* (2011)
P5	GTGGCGCAGCACCGT CAAG	Anneals to 11272 - 11290 bp of pDC3000A in the reverse orientation.	Landgraf *et al.* (2006)
T1	GTAGATCACCGAGAG ATTGC	Anneals to 10753 - 10772 bp of pDC3000A.	Landgraf *et al.* (2006)

Table S3. *Arabidopsis thaliana* accessions evaluated for resistance to *Pseudomonas syringae pv. tomato (Pst)* DC3000.

Accession	ABRC stock number or reference
9354	CS22468
9481	CS22458
9481A	CS22459
9481B	CS22460
9481C	CS22461
9481D	CS22462
Abd-0	CS932
Abil-1	CS28920
Abil-2	CS28921
Ag-0	CS901
Ak-1	CS938
Alc-0	CS1656
Alst-1	CS22550
Amel-1	CS22526
Amel-2	CS22527
An-1	CS22626
An-2	CS946
And-1	CS28938
And-2	CS28939
And-3	CS28940
And-4	CS28941
Ang-0	CS948
Ang-1	CS950
Ange-1	CS22519
Anholt-1	CS22313
Anholt-2	CS22314
Anholt-3	CS22315
Anholt-4	CS22316
Anholt-5	CS22317
Anholt-6	CS22318
Anholt-7	CS22319
Anholt-8	CS22320
Anholt-9	CS22321
Anholt-10	CS22322

Accession	ABRC stock number or reference
Anholt-11	CS22323
Anholt-12	CS22324
Anholt-13	CS22325
Anholt-14	CS22326
Anholt-15	CS22327
Anholt-16	CS22328
Anholt-17	CS22329
Anholt-18	CS22330
Anholt-19	CS22331
Anholt-20	CS22332
Anholt-21	CS22333
Anholt-22	CS22334
Anholt-23	CS22335
Anholt-24	CS22336
Anholt-25	CS22337
Anholt-26	CS22338
Anholt-27	CS22339
Anholt-28	CS22340
Ann-1	CS22520
Appt-1	CS22528
Arby-1	CS22547
Ayu-Dag-1	CS22815
Ayu-Dag-2	CS22816
Ayu-Dag-3	CS22817
Ayu-Dag-4	CS22818
Ayu-Dag-5	CS22819
Ayu-Dag-6	CS22820
Ayu-Dag-8	CS22821
Ayu-Dag-9	CS22822
Ba-1	CS952
Baa-1	CS22529
Bak-1	CS22755
Bak-2	CS22756
Bak-3	CS22757
Bak-4	CS22758
Bak-5	CS22759
Bak-7	CS22760
Bak-8	CS22761
Bak-9	CS22762

Accession	ABRC stock number or reference
Bay-0	CS22633
Bch-1	CS956
Bch-3	CS958
Bch-4	CS960
Bd-0	CS962
Be-0	CS964
Be-1	CS966
Belm-12	Dittmar *et al.* (2014)
Benk-1	CS22530
Benk-2	CS22531
Ber	CS3109
Berkeley	CS8068
BG1	CS22341
BG2	CS22342
BG3	CS22343
BG4	CS22344
BG5	CS22345
BG6	CS22346
BG7	CS22347
BG9	CS22349
Bil-5	CS22578
Bil-7	CS22579
Bl-1	CS968
Bla-1	CS970
Bla-2	CS6194
Bla-3	CS974
Bla-4	CS976
Bla-5	CS978
Bla-6	CS980
Bla-10	CS982
Bla-11	CS984
Bla-12	CS986
Bla-14	CS988
Blh-1	CS1030
Blh-2	CS1054
Bm-0	CS1666
Bn-0	CS990
Boot-1	CS22551
Bor-1	CS22590

Accession	ABRC stock number or reference
Bor-4	CS22591
Br-0	CS994
Bs-1	CS996
Bs-2	CS998
Bs-5	CS1000
Bsch-0	CS1002
Bsch-2	CS1004
Bu-0	CS1006
Bu-2	CS1008
Bu-3	CS1010
Bu-4	CS1012
Bu-5	CS1014
Bu-6	CS1016
Bu-7	CS1018
Bu-8	CS1020
Bu-9	CS1022
Bu-11	CS1024
Bu-13	CS1026
Bu-14	CS1032
Bu-15	CS1034
Bu-17	CS1036
Bu-18	CS1038
Bu-19	CS1040
Bu-20	CS1042
Bu-21	CS1044
Bu-22	**CS1046**
Bu-23	CS1048
Bu-24	CS1050
Bu-25	**CS1052**
Buckhorn Pass	CS8067
Bur-0	CS22656
C24	CS22620
Ca-0	CS1060
Cal-0	CS1062
Cala-1	CS22783
Cala-2	CS22784
Cala-3	CS22785
Cala-4	CS22786
Cala-5	CS22787

Accession	ABRC stock number or reference
Cala-6	CS22788
Cala-7	CS22789
Cala-8	CS22790
Can-0	CS1064
Cant-1	CS28854
Cant-2	CS28855
Cant-3	CS28856
Cant-4	CS28857
Cant-5	CS28858
Cant-6	CS28859
Cant-7	CS28860
Cant-8	CS28861
Cen-0	CS1066
Cerv-1	CS22523
Cha-0	CS1068
Cha-1	CS1070
Chat-1	CS22521
Chi-0	CS1072
Chi-1	CS1074
Chi-2	CS1076
CIBC-1	CS22220
CIBC-2	CS22221
CIBC-4	CS22223
CIBC-5	CS22602
CIBC-6	CS22225
CIBC-7	CS22226
CIBC-10	CS22229
CIBC-11	CS22230
CIBC-12	CS22231
CIBC-13	CS22232
CIBC-14	CS22233
CIBC-15	CS22234
CIBC-16	**CS22235**
CIBC-17	CS22603
CIBC-18	CS22237
CIBC-19	CS22238
CIBC-20	CS22239
Cit-0	CS1080
Cl-0	CS1082

Accession	ABRC stock number or reference
Cnt-1	CS1635
Co	**CS3180**
Co-1	CS1084
Co-2	CS1086
Co-3	**CS1088**
Co-4	CS1090
Col-0	CS22625
Col-1	CS3176
Col-3	CS908
Col-4	CS933
Col-5(gl1)	CS1644
Col-6(gl1)	CS8155
Col-7	CS3731
Col(gl1)	CS3879
Cold Spring Harbor Lab-1	CS22419
Cold Spring Harbor Lab-2	CS22420
Cold Spring Harbor Lab-3	CS22421
Cold Spring Harbor Lab-4	CS22422
Cold Spring Harbor Lab-5	CS22423
Cold Spring Harbor Lab-6	CS22424
Cold Spring Harbor Lab-7	CS22425
Cold Spring Harbor Lab-8	CS22426
Cold Spring Harbor Lab-9	CS22427
Cold Spring Harbor Lab-10	CS22428
Cold Spring Harbor Lab-11	CS22429
Cold Spring Harbor Lab-12	CS22430
Cold Spring Harbor Lab-13	CS22431
Cold Spring Harbor Lab-14	CS22432
Cold Spring Harbor Lab-15	CS22433
Cold Spring Harbor Lab-17	CS22434
Com-1	CS22522
Ct-1	CS22639
Cvi-0	CS22614
Cvi-1	CS8580
Da-0	CS1098
Da(1)-12	CS917
Db-0	CS1100
Db-1	CS1102
Db-2	CS1104

Accession	ABRC stock number or reference
Del-1	CS28885
Del-4	CS28886
Del-6	CS28887
Del-8	CS28912
Del-8	CS28888
Del-9	CS28889
Del-10	CS28890
Del-11	CS28891
Del-12	CS28892
Di-0	CS1106
Di-1	CS1108
Di-2	CS1110
Di-G	CS910
Di-M	CS919
Do-0	CS1112
Dog-4	CS22698
Dog-5	CS22699
Dog-6	CS22700
Dog-7	CS22701
Dog-8	CS22702
Dr-0	CS1114
Dra-0	CS1116
Dra-1	CS1118
Dra-2	CS1120
Durh-1	CS22552
Durh-2	CS22553
Dzi-1	CS28980
Ede-1	CS22532
Eden-1	CS22572
Eden-2	CS22573
Edi-0	CS22657
Edinburgh-1	CS28958
Edinburgh-2	CS28959
Edinburgh-3	CS28960
Edinburgh-4	CS28961
Edinburgh-5	CS28962
Edinburgh-6	CS28963
Edinburgh-7	CS28964
Edinburgh-8	CS28965

Accession	ABRC stock number or reference
Ei-2	CS22616
Ei-4	CS1126
Ei-5	CS1128
Ei-6	CS1130
Eil-0	CS1132
El-0	CS1134
Ema-1	CS1637
En-1	CS1136
En-2	CS1138
En-D	CS920
En-T	CS6176
ENF	CS8141
Ep-0	CS1140
ER	CS3177
Er-0	CS1142
Eri-1	CS22548
Es-0	**CS1144**
Est	CS911
Est-0	CS1148
Est-1	**CS22629**
Et-0	CS1152
Fab-2	CS22576
Fab-4	CS22577
Fe-1	CS1154
Fei-0	CS22645
Fi-0	CS1156
Fi-1	CS1158
Fl-1	CS1160
Fl-1	CS1160
FM3	CS22385
FM8	CS22389
FM9	CS22390
FM10	CS22391
FM11	CS22392
FM12	CS22393
FM13	CS22394
FM14	CS22395
FM15	CS22396
FM18	CS22398

Accession	ABRC stock number or reference
FM19	CS22399
FM20	CS22400
Fr-2	CS1168
Fr-3	CS1170
Fr-4	CS1172
Fr-5	CS1174
Fr-6	CS1176
Fr-7	CS1178
Ga-0	CS22634
Ga-2	CS1182
Gd-1	CS1184
Ge-0	CS1186
Ge-1	CS1188
Ge-2	CS1190
Geg-14	CS22763
Gel-1	CS22533
Gie-0	CS1192
Gifu-2	CS3963
Gö-0	CS1194
Gö-2	CS1196
Goettingen-1	CS22277
Goettingen-2	CS22278
Goettingen-3	CS22279
Goettingen-4	CS22280
Goettingen-5	CS22281
Goettingen-6	CS22282
Goettingen-8	CS22284
Goettingen-9	CS22285
Goettingen-10	CS22286
Goettingen-11	CS22287
Goettingen-12	CS22288
Goettingen-13	CS22289
Goettingen-14	CS22290
Goettingen-15	CS22291
Goettingen-16	CS22292
Goettingen-17	CS22293
Goettingen-18	CS22294
Goettingen-19	CS22295
Goettingen-20	CS22296

Accession	ABRC stock number or reference
Goettingen-21	CS22297
Goettingen-23	CS22299
Goettingen-24	CS22300
Goettingen-25	CS22301
Goettingen-26	CS22302
Goettingen-27	CS22303
Goettingen-28	CS22304
Goettingen-29	CS22305
Goettingen-30	CS22306
Goettingen-31	CS22307
Goettingen-32	CS22308
Goettingen-33	CS22309
Goettingen-34	CS22310
Goettingen-35	CS22311
Goettingen-36	CS22312
Gol-1	CS28973
Gol-2	CS28974
Gol-3	CS28975
Gol-5	CS28976
Gol-6	CS28977
Gol-7	CS28978
Gol-8	CS28979
Gor-7	CS22608
Got-22	CS22609
Gr-1	CS1198
Gr-2	CS1200
Gr-3	CS1202
Gr-4	CS1204
Gr-5	CS1206
Gr-6	CS1208
Gr3	CS3179
Gre-0	CS1210
Gu-0	CS22617
Gü-1	CS1214
Gy-0	CS22631
H55	CS923
Ha-0	CS1218
Harvard Square-1	CS22351
Harvard Square-7	CS22353

Accession	ABRC stock number or reference
Harvard Square-10	CS22354
Harvard Square-11	CS22355
Harvard Square-12	CS22356
Harvard Square-17	CS22359
Hau-0	CS1220
Heem-1	CS28942
Heem-2	CS28943
Heem-3	CS28944
Heem-4	CS28945
Heem-6	CS28946
Heem-7	CS28947
Heem-8	CS28948
Heem-9	CS28949
Hey-1	CS22534
Hh-0	CS1224
Hi-0	CS1226
Hl-0	CS1228
Hl-2	CS1230
Hl-3	CS1232
Hn-0	CS1234
Hodja-Obi-Garm	CS922
HR-5	CS22596
HR-8	CS22208
HR-10	CS22597
HR-14	CS22213
HR-15	CS22214
HR-17	CS22216
Hs-0	CS1236
In-0	CS1238
Is-0	CS1240
Is-1	CS1242
Istisu-1	CS22730
Istisu-3	CS22731
Istisu-4	CS22732
Istisu-5	CS22733
Istisu-6	CS22734
Istisu-7	CS22735
Istisu-8	CS22736
Istisu-9	CS22737

Accession	ABRC stock number or reference
Ita-0	CS1244
Jag-2	CS-28901
Jag-3	CS28902
Jag-4	CS28903
Jag-5	CS28904
Jag-6	CS28905
Jag-8	CS28906
Jag-9	CS28907
Jag-10	CS28908
Je-0	CS1246
Je54	CS924
Jedb-1	CS22554
Jl-1	CS1248
Jl-2	CS1250
Jl-3	CS1252
Jl-4	CS1254
Jl-5	CS1256
Jm-0	CS1258
Jm-1	CS1260
Jm-2	CS1262
Js-0	CS1670
Ka-0	CS1266
Kas-1	CS903
Kastel-1	CS22807
Kastel-2	CS22808
Kastel-3	CS22809
Kastel-4	CS22810
Kastel-5	CS22811
Kastel-6	CS22812
Kastel-7	CS22813
Kastel-8	CS22814
Kb-0	CS1268
Kelsterbach -1	CS6038
Kelsterbach -2	CS6039
Kelsterbach -3	CS6040
Kelsterbach -4	CS6041
KEN	CS8142
Kil-0	CS1270
Kin-0	CS22654

Accession	ABRC stock number or reference
Kl-0	CS1274
Kl-1	CS1276
Kl-2	CS1278
Kl-3	CS1280
Kl-4	CS1282
Kl-5	CS1284
Kn-0	CS1286
Knox-1	CS22401
Knox-2	CS22402
Knox-3	CS22403
Knox-4	CS22404
Knox-5	CS22405
Knox-6	CS22406
Knox-7	CS22407
Knox-8	CS22408
Knox-9	CS22409
Knox-10	CS22566
Knox-11	CS22411
Knox-12	CS22412
Knox-13	CS22413
Knox-14	CS22414
Knox-15	CS22415
Knox-16	CS22416
Knox-17	CS22417
Knox-18	CS22567
Ko-2	CS1288
Koch-1	CS22823
Koch-2	CS22824
Koch-3	CS22825
Koch-4	CS22826
Koch-5	CS22827
Koch-6	CS22828
Koch-7	CS22829
Koch-8	CS28852
Koch-9	CS28853
Kondara	CS916
Kr-0	CS1296
Kro-0	CS1300
Krot-0	CS3886

Accession	ABRC stock number or reference
Krot-1	CS3887
Krot-2	CS3888
Ksk-1	CS1634
Kyoto	CS3964
KZ-1	CS22606
KZ-2	CS22436
KZ-4	CS22437
KZ-6	CS22438
KZ-7	CS22439
KZ-8	CS22440
KZ-9	CS22607
KZ-10	CS22442
KZ-11	CS22443
KZ-12	CS22444
KZ-13	CS22445
La-0	CS1298
La-1	CS1302
Lag1-2	CS22738
Lag1-3	CS22739
Lag1-4	CS22740
Lag1-5	CS22741
Lag1-7	CS22743
Lag1-7	CS22743
Lag1-8	CS22744
Lag1-9	CS22745
Lag2-1	CS22746
Lag2-2	CS22747
Lag2-3	CS22748
Lag2-4	CS22749
Lag2-5	CS22750
Lag2-6	CS22751
Lag2-7	CS22752
Lag2-10	CS22753
Lan-0	CS1304
Laud-1	CS22555
Lc-0	CS1306
Le-0	CS1308
Ler-1	CS22618
Ler-2	CS8581

Accession	ABRC stock number or reference
Lerik1-2	CS22711
Lerik1-3	CS22712
Lerik1-4	CS22713
Lerik1-5	CS22714
Lerik1-6	CS22715
Lerik1-7	CS22716
Lerik2-1	CS22717
Lerik2-2	CS22718
Lerik2-3	CS22719
Lerik2-4	CS22720
Lerik2-5	CS22721
Lerik2-6	CS22722
Lerik2-7	CS22723
Lerik2-8	CS22724
Li-1	CS1310
Li-2	CS1312
Li-2:1	CS1314
Li-3	CS1316
Li-3:3	CS1318
Li-5	CS1320
Li-5:2	CS1322
Li-6	CS1326
Li-6:1	CS1328
Li-7	CS1330
Li-8	CS1332
Li-10	CS1334
Li-11	CS1651
Limeport	CS8070
LIN	CS8144
Lind-1	CS22556
Lip-0	CS1336
Litva	CS925
LL-0	CS22650
Ll-1	CS1340
Ll-2	CS1342
Lm-2	CS1344
Lo-1	CS1346
Lo-2	CS1348
Loh-0	**CS1350**

Accession	ABRC stock number or reference
Lov-1	CS22574
Lov-5	CS22575
Lovel-1	CS28922
Lp2-2	CS22594
Lp2-6	CS22595
Lu-1	CS1352
Lz-0	CS22615
M3385S	CS3111
M7323S	CS3112
M7884S	CS3113
M7943S	CS3114
Ma-0	CS1356
Ma-2	CS1358
Mc-0	CS1362
Me-0	CS1364
Meise-1	CS28950
Meise-2	CS28951
Meise-3	CS28952
Meise-4	CS28953
Meise-5	CS28954
Meise-6	CS28955
Meise-7	CS28956
Meise-8	CS28957
Mh-0	CS904
Mh-1	CS1368
Mir-0	CS1378
Mnz-0	CS1370
Mr-0	CS22640
Mrk-0	CS22635
Ms-0	CS22655
Mt-0	CS22642
Mv-0	CS1386
Mz-0	CS22636
N1	CS22479
N2	CS22480
N3	CS22481
N4	CS22482
N5	CS22483
N6	CS22484

Accession	ABRC stock number or reference
N7	CS22485
N8	CS22486
N9	CS22487
N10	CS22488
N11	CS22489
N12	CS22490
N13	CS22491
N14	CS22492
N15	CS22493
N16	CS22494
N17	CS22495
N18	CS22496
Na-1	CS1384
Nar-1	CS22725
Nar-2	CS22726
Nar-3	CS22727
Nar-4	CS22728
Nar-5	CS22729
Navajo-1	CS22779
Navajo-4	CS22780
Navajo-5	CS22781
Navajo-6	CS22782
Nc-1	CS1388
Nd-0	CS1390
Nd-1	CS22619
Nemrut-1	CS28917
NFA-8	CS22598
NFA-10	CS22599
NFC1	CS22182
NFC2	CS22183
NFC3	CS22184
NFC4	CS22185
NFC5	CS22186
NFC6	CS22187
NFC8	CS22189
NFC9	CS22190
NFC10	CS22191
NFC11	CS22192
NFC13	CS22194

Accession	ABRC stock number or reference
NFC14	CS22195
NFC15	CS22196
NFC16	CS22197
NFC17	CS22198
NFC18	CS22199
NFC20	CS22201
NFE1	CS22163
NFE5	CS22167
NFE6	CS22168
NFE7	CS22169
NFE8	CS22170
NFE9	CS22171
NFE10	CS22172
NFE15	CS22177
NFE16	CS22178
NFE17	CS22179
NFE18	CS22180
NFE19	CS22181
Nie-0	CS1392
No-0	CS1394
Nok-0	CS1398
Nok-1	CS1400
Nok-2	CS1402
Nok-3	CS22643
Np-0	CS1396
Nw-0	CS1408
Nw-1	CS1410
Nw-2	CS1412
Nw-3	CS1414
Nw-4	CS1416
Ob-0	CS1418
Ob-1	CS1420
Ob-2	CS1422
Ob-3	CS1424
Old-1	CS1426
Old-2	CS1428
Omo2-1	CS22584
Omo2-3	CS22585
Or-0	CS1432

Accession	ABRC stock number or reference
Ost-0	CS1430
Ottb-1	CS22557
Ove-0	CS1434
Oy-0	CS22658
Oy-1	CS1643
Pa-1	CS1438
Pa-2	CS1440
Pa-3	CS1442
Pdi-0	CS1446
Per-1	CS1444
Per-2	CS1448
Per-3	CS1450
Petergof	CS926
Pf-0	CS1452
PHW-1	CS6001
PHW-2	CS6002
PHW-3	CS6003
PHW-4	CS6004
PHW-5	CS6005
PHW-6	CS6006
PHW-7	CS6007
PHW-9	CS6009
PHW-10	CS6010
PHW-11	CS6011
PHW-12	CS6012
PHW-13	CS6013
PHW-14	CS6014
PHW-15	CS6015
PHW-16	CS6016
PHW-17	**CS6017**
PHW-18	CS6018
PHW-19	CS6019
PHW-20	CS6020
PHW-21	CS6021
PHW-22	CS6022
PHW-23	CS6023
PHW-24	CS6024
PHW-25	CS6025
PHW-26	CS6026

Accession	ABRC stock number or reference
PHW-27	CS6027
PHW-28	CS6028
PHW-29	CS6029
PHW-30	CS6030
PHW-31	CS6031
PHW-32	CS6032
PHW-33	CS6033
PHW-34	CS6034
PHW-35	CS6035
PHW-36	CS6036
PHW-37	CS6037
Pi-0	CS1454
Pi-2	CS1456
Pirin-10	CS28881
Pirin-12	CS28882
Pirin-14	CS28883
Pirin-17	CS28884
Pla-0	CS1458
Pla-1	CS1460
Pla-2	CS1462
Pla-3	CS1464
Pla-4	CS1466
Pn-0	CS1468
Pna-10	CS22571
Pna-17	CS22570
Po-0	CS1470
Po-1	CS1472
Pog-0	CS1476
Por-1	CS28893
Por-3	CS28894
Por-4	CS28895
Por-6	CS28896
Por-7	CS28897
Por-9	CS28898
Por-10	CS28899
Por-11	CS28900
Pr-0	CS1474
Pro-0	CS22649
Pt-0	CS1478

Accession	ABRC stock number or reference
Pu2-7	CS22592
Pu2-23	CS22593
Puent-1	CS22773
Puent-3	CS22774
Puent-4	CS22775
Puent-5	CS22776
Puent-6	CS22777
Puent-8	CS22778
PUZ2	CS22446
PUZ5	CS22448
PUZ8	CS22449
PUZ10	CS22450
PUZ16	CS22451
PUZ22	CS22452
PUZ23	CS22453
PUZ24	CS22454
PUZ32	CS22455
Ra-0	**CS22632**
Ragl-1	CS22558
Rak-2	CS1484
Rasc-1	CS22559
RC1058A	CS22465
Rd-0	CS1482
Ren-1	CS22610
Ren-11	CS22611
Renk-1	CS22535
Rennes-3	CS22255
Rennes-5	CS22257
Rennes-17	CS22269
Rennes-19	CS22271
Rennes-20	CS22272
Rennes-21	CS22273
Rennes-23	CS22275
Rennes-24	CS22276
Rhen-1	CS22536
Ri-0	CS1492
RLD-1	CS913
RLD-2	CS1641
Rmx-A02	CS22568

Accession	ABRC stock number or reference
Rmx-A180	CS22569
Rome-1	CS22524
Rou-0	CS1488
RP1	CS22362
RP2	CS22363
RP3	CS22364
RP4	CS22365
RP5	CS22366
RP6	CS22367
RP7	CS22368
RP8	CS22369
RP9	CS22370
RP10	CS22371
RP11	CS22372
RP14	CS22375
RP15	CS22376
RP16	CS22377
RP17	CS22378
RP18	CS22379
RP19	CS22380
RP20	CS22381
RP21	CS22382
RP22	CS22383
RRS-7	CS22564
RRS-10	CS22565
Rsch-0	CS1490
Rsch-4	CS1494
Ru-0	CS1496
Rubezhnoe-1	CS927
Rubezhnoe-2	CS928
S96	CS914
Sah-0	CS1500
San Martin-1	CS22791
San Martin-2	CS22792
San Martin-3	CS22793
San Martin-4	CS22794
San Martin-5	CS22795
San Martin-6	CS22796
San Martin-7	CS22797

Accession	ABRC stock number or reference
San Martin-8	CS22798
Santa Clara	CS8069
Sap-0	CS1506
Sapporo-0	CS22456
Sav-0	CS1514
Se-0	CS22646
Seattle-0	CS6187
Sei-0	CS1504
Sev-1	CS22764
Sf-1	CS1512
Sf-2	CS1516
Sf-2e	CS1674
Sg-1	CS1519
Sg-2	CS1520
Sh-0	CS1522
Sha	CS22652
Si-0	CS1524
Sn(5)-1	CS6181
Sofia-1	CS28865
Sofia-2	CS28866
Sofia-3	CS28867
Sofia-6	CS28868
Sofia-7	CS28869
Sofia-8	CS28870
Sofia-11	CS28871
Sofia-12	CS28872
Sorbo	CS22653
Sp-0	CS1530
Spr1-2	CS22582
Spr1-6	CS22583
SQ-1	CS22600
SQ-4	CS22243
SQ-8	CS22601
St-0	CS1534
Ste-0	CS1536
Stu-1	CS28862
Stu-2	CS28863
Stu-3	CS28864
Stw-0	CS1538

Accession	ABRC stock number or reference
Su-0	CS1540
Ta-0	CS1548
Tac-0	CS3885
Tamm-2	CS22604
Tamm-27	CS22605
Te-0	CS1550
Tha-1	CS22537
Ting-1	CS22549
Tiv-1	CS22525
Tol-0	CS8020
Tol-1	CS8021
Tol-2	CS8022
Tol-3	CS8023
Tol-4	CS8024
Tol-5	CS8025
Tol-6	CS8026
Tol-7	CS8027
Tol-8	CS8028
Tol-9	CS8029
Truk-1	CS22799
Truk-2	CS22800
Truk-3	CS22801
Truk-4	CS22802
Truk-5	CS22803
Truk-6	CS22804
Truk-7	CS22805
Truk-8	CS22806
Trust-1	CS28918
Trust-2	CS28919
Ts-1	CS22647
Ts-2	CS1554
Ts-3	CS1556
Ts-5	CS22648
Ts-6	CS1560
Ts-7	CS1562
Tscha-1	CS22518
Tsu-0	CS1564
Tsu-1	CS22641
Tu-0	CS1566

Accession	ABRC stock number or reference
Tu-1	CS1568
Tul-0	CS1570
Ty-0	CS1572
Uk-1	CS1574
Uk-2	CS1578
Uk-3	CS1576
Uk-4	**CS1580**
Ull2-3	CS22587
Ull2-5	CS22586
Ullapool-1	CS28966
Ullapool-2	CS28967
Ullapool-3	CS28968
Ullapool-4	CS28969
Ullapool-5	CS28970
Ullapool-6	CS28971
Ullapool-8	CS28972
Uod-1	CS22612
Uod-7	CS22613
Utrecht	CS6150
Van-0	CS22627
Var2-1	CS22580
Var2-6	CS22581
Vash-1	CS22754
Ven-1	CS22538
Ven-2	CS22539
Vi-0	CS1582
Vind-1	CS22560
Vorst-1	CS28923
Vorst-2	CS28924
Vorst-3	CS28925
Vorst-4	CS28926
Vorst-5	CS28927
Vorst-6	CS28928
Vorst-7	CS28929
Vorst-8	CS28930
Vorst-9	CS28931
Vorst-10	CS28932
Vorst-11	CS28933
Vorst-12	CS28934

Accession	ABRC stock number or reference
Vorst-13	CS28935
Vorst-14	CS28936
Vorst-15	CS28937
Wa-1	CS22644
Wag-1	CS22540
Wag-2	CS22541
Wag-3	CS22542
Wag-4	CS22543
Wag-5	CS22544
Wag-5	CS22544
Wag-6	CS22545
WAR	CS8143
Wc-1	CS1588
Wc-2	CS1590
Wei-0	CS3110
Werl-1	CS22546
Wil-1	CS1594
Wil-2	CS1596
Wil-3	CS1598
Wl-0	CS1630
Ws	CS915
Ws-0	CS22623
Ws-1	CS2223
Ws-2	CS22659
Ws-3	CS1638
Ws-4	CS5390
Wt-1	CS1604
Wt-2	CS1606
Wt-3	CS1608
Wt-4	CS1610
Wt-5	CS22637
Wu-0	CS1614
X-0	CS1616
Xan-1	CS22703
Xan-2	**CS22704**
Xan-3	CS22705
Xan-4	CS22706
Xan-5	**CS22707**
Xan-6	CS22708

Accession	ABRC stock number or reference
Xan-7	CS22709
Xan-8	CS22710
XX-0	CS1618
XXX-0	CS1620
Yeg-1	CS22765
Yeg-2	CS22766
Yeg-3	CS22767
Yeg-4	CS22768
Yeg-5	CS22769
Yeg-6	CS22770
Yeg-7	CS22771
Yeg-8	CS22772
Yo-0	CS22624
Zab-1	CS28909
Zab-2	CS28910
Zab-3	CS28911
Zab-7	CS28913
Zab-9	CS28914
Zab-11	CS28915
Zab-13	CS28916
Zdr-1	CS22588
Zdr-6	CS22589
Zloc-1	CS28873
Zloc-2	CS28874
Zloc-3	CS28875
Zloc-5	CS28876
Zloc-6	CS28877
Zloc-7	CS28878
Zloc-10	CS28879
Zloc-11	CS28880
Zu-0	CS1626
Zu-1	CS1628

Highlighted in purple are those accessions that were resistant to *Pst* DC3000 infection.

Table S4. χ^2 goodness-of-fit test between the observed and expected segregation for the resistance to *Pseudomonas syringae* pv. *tomato* DC3000 in F_2 populations derived from crosses between resistant and susceptible accessions.

	Observed phenotype				Expected genotype, 1 gene				Expected genotype, 2 genes			
	R	**U**	**S**	**Total**	**RR**	**Rr**	**rr**	**χ^2 test**	**$R_aR_aR_bR_b$**	**R_x___**	**$r_ar_ar_br_b$**	**χ^2 test**
Bu-22 ♀ x Col-0 ♂ F_2	84	214	83	381	95	191	95	**0.05**	24	333	24	0.00
CIBC-16 ♀ x Col-0 ♂ F_2	98	334	44	476	119	238	119	0.00	30	417	30	0.00
Ra-0 ♀ x Col-0 ♂ F_2	126	87	17	230	58	115	58	0.00	14	201	14	0.00
Xan-5 ♀ x Col-0 ♂ F_2	205	223	43	471	118	236	118	0.00	29	412	29	0.00

Rejection of the H_o implies that the segregation does not follow the expected segregation for 1 or 2 resistance loci. Highlighted in bold is the χ2 test that followed an expected segregation. The conclusions would be unchanged even if the resistance would be a recessive trait. Abbreviations: R = Resistant; U = Undetermined; and S = Susceptible.

Table S5. List of *Pseudomonas syringae* pv. *tomato* (*Pst*) DC3000 effectors and the effector gene cluster to which they belong.

Cluster	Effector	Gene identifier
	hopK1	*PSPTO_0044*
	hopY1	*PSPTO_0061*
I	*hopU1*	*PSPTO_0501*
I	*hopF2*	*PSPTO_0502*
II	*hopH1*	*PSPTO_0588*
II	*hopC1*	*PSPTO_0589*
IV	*hopD1*	*PSPTO_0876*
IV	*hopQ1-1*	*PSPTO_0877*
IV	*hopR1*	*PSPTO_0883*
	hopAM1-1	*PSPTO_1022*
CEL	*hopN1*	*PSPTO_1370*
CEL	*hopAA1-1*	*PSPTO_1372*
CEL	*hopM1*	*PSPTO_1375*
CEL	*avrE*	*PSPTO_1377*
	hopB1	*PSPTO_1406*
	hopAF1	*PSPTO_1568*
	avrPtoB	*PSPTO_3087*
	avrPto	*PSPTO_4001*
	hopE1	*PSPTO_4331*
VIII	***hopS2***	***PSPTO_4588***
VIII	***hopT2***	***PSPTO_4590***
VIII	***hopO1-3***	***PSPTO_4592***
VIII	***hopT1-2***	***PSPTO_4593***
VIII	***hopO1-2***	***PSPTO_4594***
VIII	***hopS1***	***PSPTO_4597***
	hopAD1	***PSPTO_4691***
IX	*hopAA1-2*	*PSPTO_4718*
IX	*hopV1*	*PSPTO_4720*
IX	*hopAO1*	*PSPTO_4722*
IX	*hopG1*	*PSPTO_4727*
	hopI1	*PSPTO_4776*
	hopA1	*PSPTO_5354*
	hopBM1	***PSPTO_5633***
X	*hopAM1-2*	*PSPTO_A0005*
X	*hopX1*	*PSPTO_A0012*
X	*hopO1-1*	*PSPTO_A0018*
X	*hopT1-1*	*PSPTO_A0019*

Effectors highlighted in bold are still present in strain *Pst* Δ*28E*. Effectors in cluster VIII are potentially pseudogenes.

Table S6. Search for the effector responsible for the accelerated cell death response in *Pseudomonas syringae* pv. *tomato* (*Pst*) DC3000-resistant accessions.

(a) Cell death phenotype 93 hours after infiltration with a high inoculum (10^8 CFU ml^{-1}) of effectorless *Pst* DC3000 strain (*Pst ∆28E*).

Accession	*Pst ∆28E*			
	No	Partial	Collapsed	Total
Col-0	8	0	0	8
Bu-22	8	0	0	8
Bu-25	8	0	0	8
Xan-5	8	0	0	8

Eight leaves from 8 different plants were infiltrated. Cell death was evaluated into 3 categories: (1) No leaf area showing necrosis symptoms. (2) Partial necrosis symptoms. (3) Fully collapsed leaf. No differences were observed between the response to bacterial inoculation of the three resistant accessions to that of Col-0, as determined by a Fisher's exact test ($P < 0.0125$).

(b) Cell death phenotype 26 hours after infiltration with a high inoculum (10^8 CFU ml^{-1}) of *Pst* DC3000 effector polymutant strains.

Accession	*Pst* ΔIΔIIΔIVΔIXΔX				*Pst* ΔCEL			
	No	Partial	Collapsed	Total	No	Partial	Collapsed	Total
Col-0	16	0	0	16	16	0	0	16
Bu-22	**0**	**13**	**3**	16	**0**	**8**	**8**	16
Bu-25	**2**	**11**	**3**	16	**4**	**8**	**4**	16
Xan-5	**3**	**13**	**0**	16	**0**	**8**	**8**	16

Sixteen leaves from 16 individual plants were infiltrated per strain. *Pst* Δ*I*Δ*II*Δ*IV*Δ*IX*Δ*X* strain has 5 clusters of effectors deleted (15 effectors deleted) while *Pst* Δ*CEL* has 1 cluster of effectors, the Conserved effector locus, deleted (4 effectors deleted). Cell death was evaluated into 3 categories: (1) No leaf area showing necrosis symptoms. (2) Partial necrosis symptoms. (3) Fully collapsed leaf. Highlighted in purple are those accessions whose response to bacterial inoculation was different from Col-0, as determined by a Fisher's exact test ($P < 0.0125$).

(c) Cell death phenotype 24 hours after infiltration with a high inoculum (10^8 CFU ml^{-1}) of *Pst* Δ*avrPto*Δ*avrPtoB*.

Accession	*Pst* Δ*avrPto*Δ*avrPtoB*			
	No	Partial	Collapsed	Total
Col-0	13	2	0	15
Bu-22	**5**	**10**	**0**	15
Bu-25	8	2	0	10
Xan-5	**6**	**5**	**4**	15

At least 10 leaves from 10 individual plants were infiltrated. Cell death was evaluated into 3 categories: (1) No leaf area showing necrosis symptoms. (2) Partial necrosis symptoms. (3) Fully collapsed leaf. Highlighted in purple are those accessions whose response to bacterial inoculation was different from Col-0, as determined by a Fisher's exact test ($P < 0.0125$).

Table S7. HopAM1 may be responsible for the accelerated cell death observed in accession Xan-5.

Accession	*Pst* Δ*28E*		*Pst* Δ*28E* + *hopK1*		*Pst* Δ*28E* + *hopY1*		Total
	No	Chlorosis	No	Chlorosis	No	Chlorosis	
Col-0	6	0	6	0	6	0	6
Bu-22	6	0	6	0	6	0	6
Bu-25	6	0	6	0	6	0	6
Xan-5	4	0	4	0	4	0	4

Accession	*Pst* Δ*28E* + *hopAM1*		*Pst* Δ*28E* + *hrpK1-hopB1*		*Pst* Δ*28E* + *hopAF1*		Total
	No	Chlorosis	No	Chlorosis	No	Chlorosis	
Col-0	6	0	6	0	6	0	6
Bu-22	6	0	6	0	6	0	6
Bu-25	4	2	6	0	6	0	6
Xan-5	**0**	**4**	4	0	4	0	4

Accession	*Pst* Δ*28E* + *hopE1*		*Pst* Δ*28E* + *hopI1*		*Pst* Δ*28E* + *shcA-hopA1*		Total
	No	Chlorosis	No	Chlorosis	No	Chlorosis	
Col-0	6	0	6	0	6	0	6
Bu-22	6	0	6	0	6	0	6
Bu-25	6	0	6	0	6	0	6
Xan-5	4	0	4	0	4	0	4

Cell death phenotype 93 to 96 hours after infiltration with a high inoculum (10^8 CFU ml^{-1}) of effectorless *Pseudomonas syringae* pv. *tomato* (*Pst*) DC3000 strain and strains complemented with individual effectors. Four to six leaves from 4 - 6 different plants were infiltrated per strain. *Pst* ∆*28E* has 28 effectors deleted. Individual effectors (if necessary, with their corresponding chaperone) were expressed from a broad-host range plasmid under the control of their endogenous promoter, and the plasmids were introduced into *Pst* ∆*28E*. Cell death was evaluated into 2 categories: (1) No = No symptoms. (2) Chlorosis = Leaf showed chlorotic symptoms. Highlighted in purple are those accessions whose response to bacterial inoculation was different from Col-0, as determined by a Fisher's exact test ($P < 0.0125$).

Table S8. Arabidopsis accessions and the mechanism of resistance against *Pseudomonas syringae* pv. *tomato* identified in this study.

Accession	Mechanism of resistance
Belm-12	Elevated SA accumulation
Bu-22	ETI
Bu-25	ETI
CIBC-16	Elevated SA accumulation
CO	ETI-like
Co-3	Unknown
Es-0	Surface based
Est-1	Elevated SA accumulation
Loh-0	Surface based
PHW-17	Unknown
Ra-0	Unknown
Uk-4	ETI-like
Xan-2	ETI-like
Xan-5	ETI-like

Abbreviations: ETI = effector-triggered immunity, SA = salicylic acid.

SUPPORTING INFORMATION MATERIALS AND METHODS

Methods S1. Crosses between Arabidopsis accessions.

Pseudomonas syringae pv. *tomato* (*Pst*) DC3000-susceptible Col-0 plants were crossed to *Pst* DC3000-resistant accessions Bu-22, CIBC-16, Ra-0, and Xan-5 using both parents in reciprocal crosses as male and female. To confirm that the F_1 plants were true crosses, genomic DNA was extracted using the method of Edwards *et al.* (1991) and PCR of these genomic DNA samples was performed using molecular markers nga139, nga151a, and nga171 (Berendzen *et al.*, 2005) and GoTaq® DNA polymerase (Promega).

Methods S2. Next-generation sequencing and SHOREmap mapping of resistance loci.

The genomic DNA of the F_2 parents and bulks was extracted using the Wizard® genomic DNA purification kit (Promega) following manufacturer's recommendations. After genomic DNA quantification using the Qubit® dsDNA HS assay kit (Thermo Fisher Scientific), equimolar amounts of genomic DNA were mixed to prepare the resistant and susceptible F_2 bulks. Samples were sequenced using the rapid run of the Illumina HiSeq 2500 system to obtain paired-end 250-bp reads. Reads were trimmed with Cutadapt (version 1.8.1; Martin, 2011), aligned to the TAIR10 Col-0 reference genome using Bowtie (version 2.2.3; Langmead & Salzberg, 2012), processed using SAMTools (version 0.1.19; Li *et al.*, 2009) and mapped using SHOREmap (version 3; Sun & Schneeberger, 2015).

Methods S3. Statistical analyses.

Mean comparisons within treatments were performed using Prism 6 (GraphPad Software, Inc.). Individual mean comparisons were done with a Student's *t*-test ($P < 0.05$), while multiple mean comparisons used a Dunnett's test (for comparing means to a control; $P < 0.05$) or a Tukey's HSD test (to compare all means within an experiment; $P < 0.05$). If the treatments within an experiment did not have

homogeneous variances (as determined by a Brown-Forsythe test; $P < 0.05$), a $\log_{10}$ transformation to the data was applied before performing the mean comparisons.

Fisher's exact tests ($P < 0.05$), after a Bonferroni correction for the multiple comparisons performed (in which the significance level was divided by the number of comparisons being made), were used to compare the speed of the cell death response. Comparisons were made using an online tool (Kirkman, 1996).

A χ^2 goodness-of-fit test was used to determine if the segregation of resistance to *Pseudomonas syringae pv. tomato* DC3000 in F_2 populations followed a particular expected segregation ($P < 0.05$).

SUPPORTING INFORMATION NOTES

Notes S1: References

Alfano JR, Charkowski AO, Deng W-L, Badel JL, Petnicki-Ocwieja T, van Dijk K, Collmer A. 2000. The *Pseudomonas syringae* Hrp pathogenicity island has a tripartite mosaic structure composed of a cluster of type III secretion genes bounded by exchangeable effector and conserved effector loci that contribute to parasitic fitness and pathogenicity in plants. *Proceedings of the National Academy of Sciences, USA* **97**: 4856–4861.

Berendzen K, Searle I, Ravenscroft D, Koncz C, Batschauer A, Coupland G, Somssich IE, Ulker B. 2005. A rapid and versatile combined DNA/RNA extraction protocol and its application to the analysis of a novel DNA marker set polymorphic between *Arabidopsis thaliana* ecotypes Col-0 and Landsberg *erecta*. *Plant methods* **1**: 4.

Cunnac S, Chakravarthy S, Kvitko BH, Russell AB, Martin GB, Collmer A. 2011. Genetic disassembly and combinatorial reassembly identify a minimal functional repertoire of type III effectors in *Pseudomonas syringae*. *Proceedings of the National Academy of Sciences, USA* **108**: 2975–2980.

Dittmar EL, Oakley CG, Ågren J, Schemske DW. 2014. Flowering time QTL in natural populations of *Arabidopsis thaliana* and implications for their adaptive value. *Molecular Ecology* **23**: 4291–4303.

Edwards K, Johnstone C, Thompson C. 1991. A simple and rapid method for the preparation of plant genomic DNA for PCR analysis. *Nucleic Acids Research* **19**: 1349.

Kirkman TW. 1996. *Statistics to use.* [WWW document] URL http://www.physics.csbsju.edu/stats/. [accessed 1 September 2016].

Kvitko BH, Park DH, Velásquez AC, Wei CF, Russell AB, Martin GB, Schneider DJ, Collmer A. 2009. Deletions in the repertoire of *Pseudomonas*

syringae pv. *tomato* DC3000 type III secretion effector genes reveal functional overlap among effectors. *PLoS Pathogens* **5**: e1000388.

Langmead B, Salzberg SL. 2012. Fast gapped-read alignment with Bowtie 2. *Nature Methods* **9**: 357–359.

Landgraf A, Weingart H, Tsiamis G, Boch J. 2006. Different versions of *Pseudomonas syringae* pv. *tomato* DC3000 exist due to the activity of an effector transposon. *Molecular Plant Pathology* **7**: 355–364.

Li H, Handsaker B, Wysoker A, Fennell T, Ruan J, Homer N, Marth G, Abecasis G, Durbin R, 1000 Genome Project Data Processing Subgroup. 2009. The Sequence Alignment/Map format and SAMtools. *Bioinformatics* **25**: 2078–2079.

Lin NC, Martin GB. 2005. An *avrPto*/*avrPtoB* mutant of *Pseudomonas syringae* pv. *tomato* DC3000 does not elicit Pto-mediated resistance and is less virulent on tomato. *Molecular Plant-Microbe Interactions* **18**: 43–51.

Martin M. 2011. Cutadapt removes adapter sequences from high-throughput sequencing reads. *EMBnet.journal* **17**: 10–12.

Puri N, Jenner C, Bennett M, Stewart R, Mansfield J, Lyons N, Taylor J. 1997. Expression of *avrPphB*, an avirulence gene from *Pseudomonas syringae* pv. *phaseolicola,* and the delivery of signals causing the hypersensitive reaction in bean. *Molecular Plant-Microbe Interactions* **10**: 247–256.

Ronald PC, Salmeron JM, Carland FM, Staskawicz BJ. 1992. The cloned avirulence gene *avrPto* induces disease resistance in tomato cultivars containing the *Pto* resistance gene. *Journal of Bacteriology* **174**: 1604–1611.

Sun H, Schneeberger K. 2015. SHOREmap v3.0: fast and accurate identification of causal mutations from forward genetic screens. *Methods in Molecular Biology* **1284**: 381– 395.

Wei W, Plovanich-Jones A, Deng WL, Jin QL, Collmer A, Huang HC, He SY. 2000. The gene coding for the Hrp pilus structural protein is required for type III secretion of Hrp and Avr proteins in *Pseudomonas syringae* pv. *tomato*. *Proceedings of the National Academy of Sciences USA* **97**: 2247–2252.

Xin XF, Nomura K, Aung K, Velásquez AC, Yao J, Boutrot F, Chang JH, Zipfel C, He SY. 2016. Bacteria establish an aqueous living space as a crucial virulence mechanism. *Nature* **539**: 524–529.

Zwiesler-Vollick J, Plovanich-Jones AE, Nomura K, Bandyopadhyay S, Joardar V, Kunkel BN, He SY. 2002. Identification of novel hrp-regulated genes through functional genomic analysis of the *Pseudomonas syringae* pv. *tomato* DC3000 genome. *Molecular Microbiology* **45**: 1207–1218.