Electronic Supplementary Materials

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Insecticidal features displayed by the beneficial rhizobacterium *Pseudomonas chlororaphis* PCL1606

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Table S1 Percentage of mortality of *Galleria mellonella* in each of the symptom categories after 24h post-inoculation with each of the strains tested at a dose 10^5 cfu/mL

Strains Tested	**Symptom categories**			
	0	**1**	**2**	**3**
Negative control				
No inoculation	100			
$MgSO_4$ buffer	97		3	
Wildtype bacterias control				
Pseudomonas psedualcaligenes AVO110		100		
Pseudomonas aurantiaca BL915				100
Pseudomonas protegens Pf5				100
Pseudomonas chlororaphis PCL1606		5	95	
Derivatives antibiotics mutants of PcPCL1606				
HPR mutants				
PCL1606::darB		15	85	
ComB			100	
Pyrrolnitrin mutant				
PCL1606::prnC		40	60	
Hydrogen cyanide mutant				
PCL1606::hcnB		40	60	
Citotoxin				
PCL1606::fitD		10	90	
Double mutants				
PCL1606::darBprnC			100	
PCL1606::darBhcnB			80	20
PCL1606::prnChcnB		40	60	
PCL1606::darBfitD	100			
Derivative regulating mutants of PcPCL1606				
PCL1606::gacS			13	87

Symptom categories

Figure S1

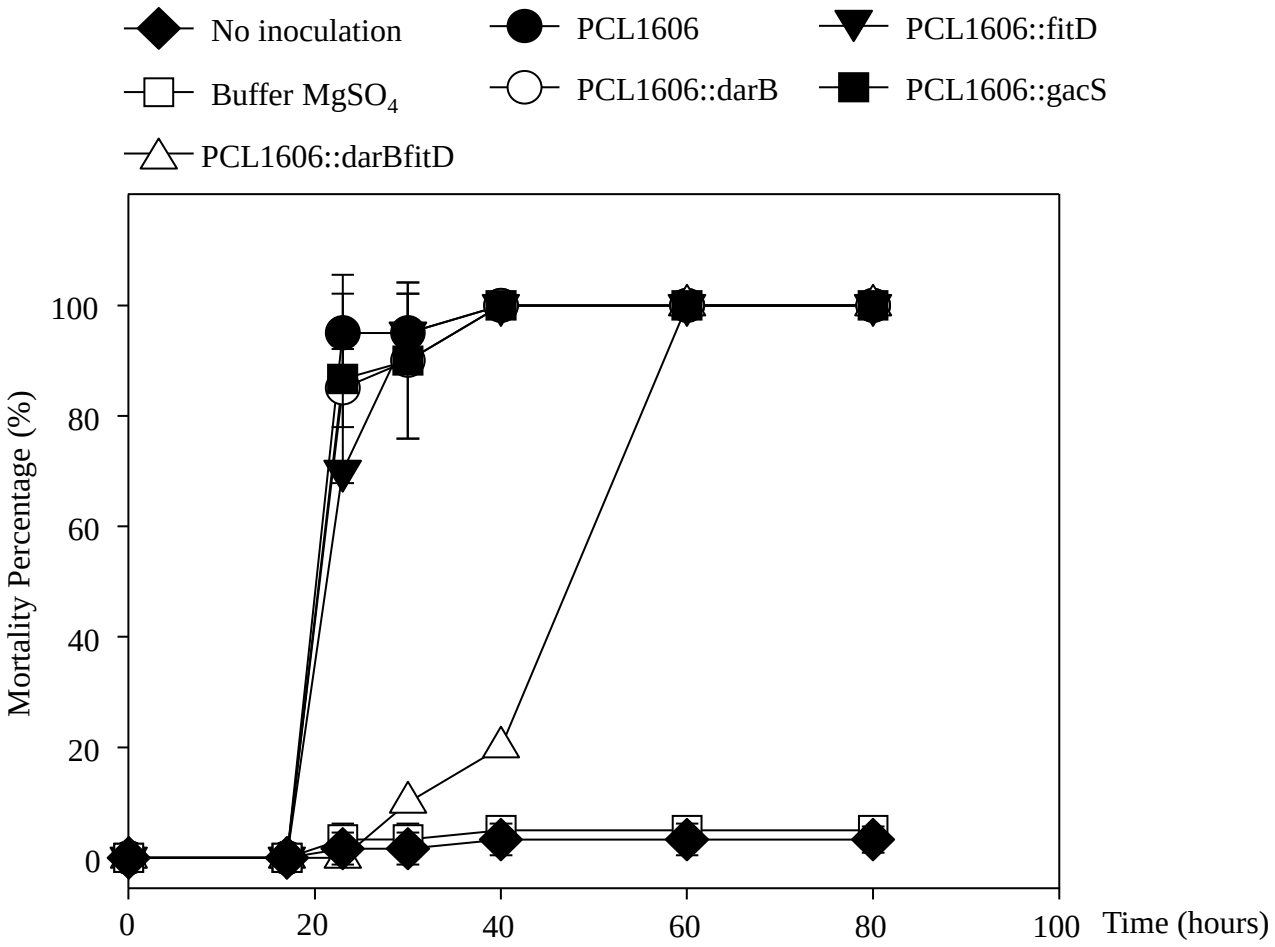

Fig. S1 Percentage of mortality of *Galleria mellonella*, infected at dose $3x10^5$ cfu/mL along eighty hours. Counting made at 0, 17, 24, 30, 40, 60 and 80-hours post-inoculation

Figure S2

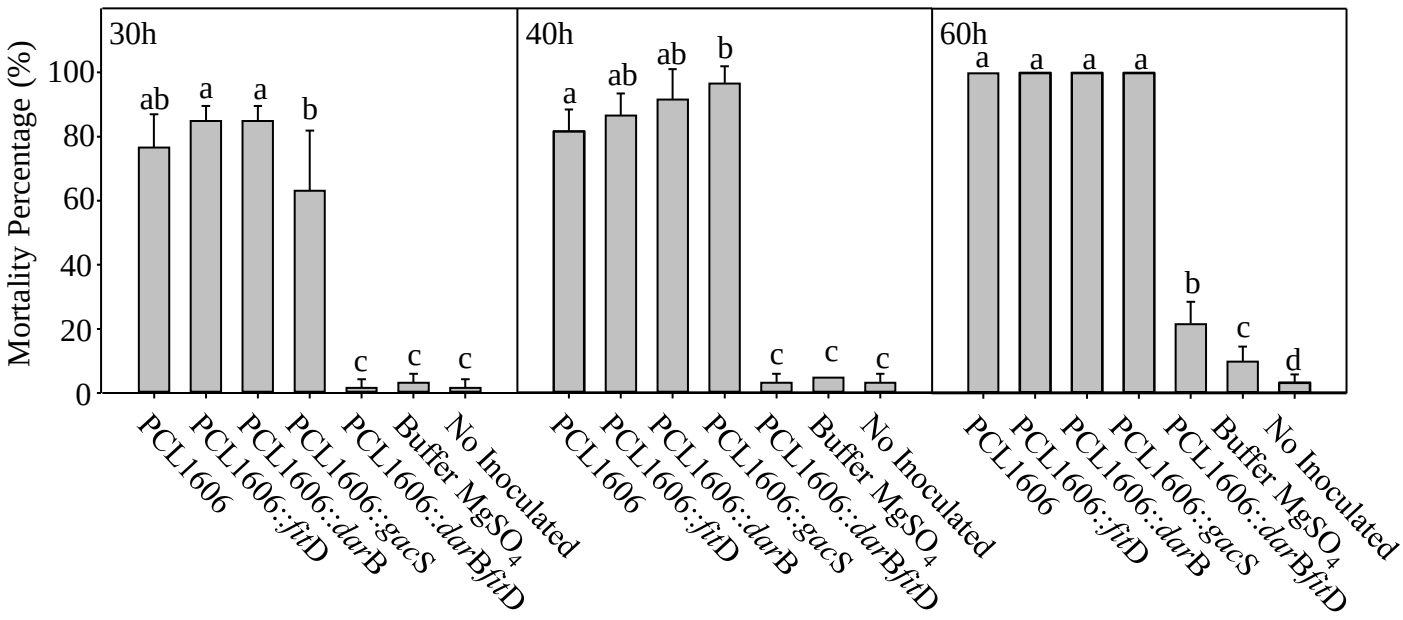

Fig. S2 Mortality of *Galleria mellonella* represented by percentage of dead larvae at 30, 40 and 60 hours of incubation post-infection at dose $3x10^3$ cfu/mL. Statistical analysis by ANOVA was performed using IBM SPSS 22 software (SPSS Inc., Chicago, IL, United States).

Figure S3

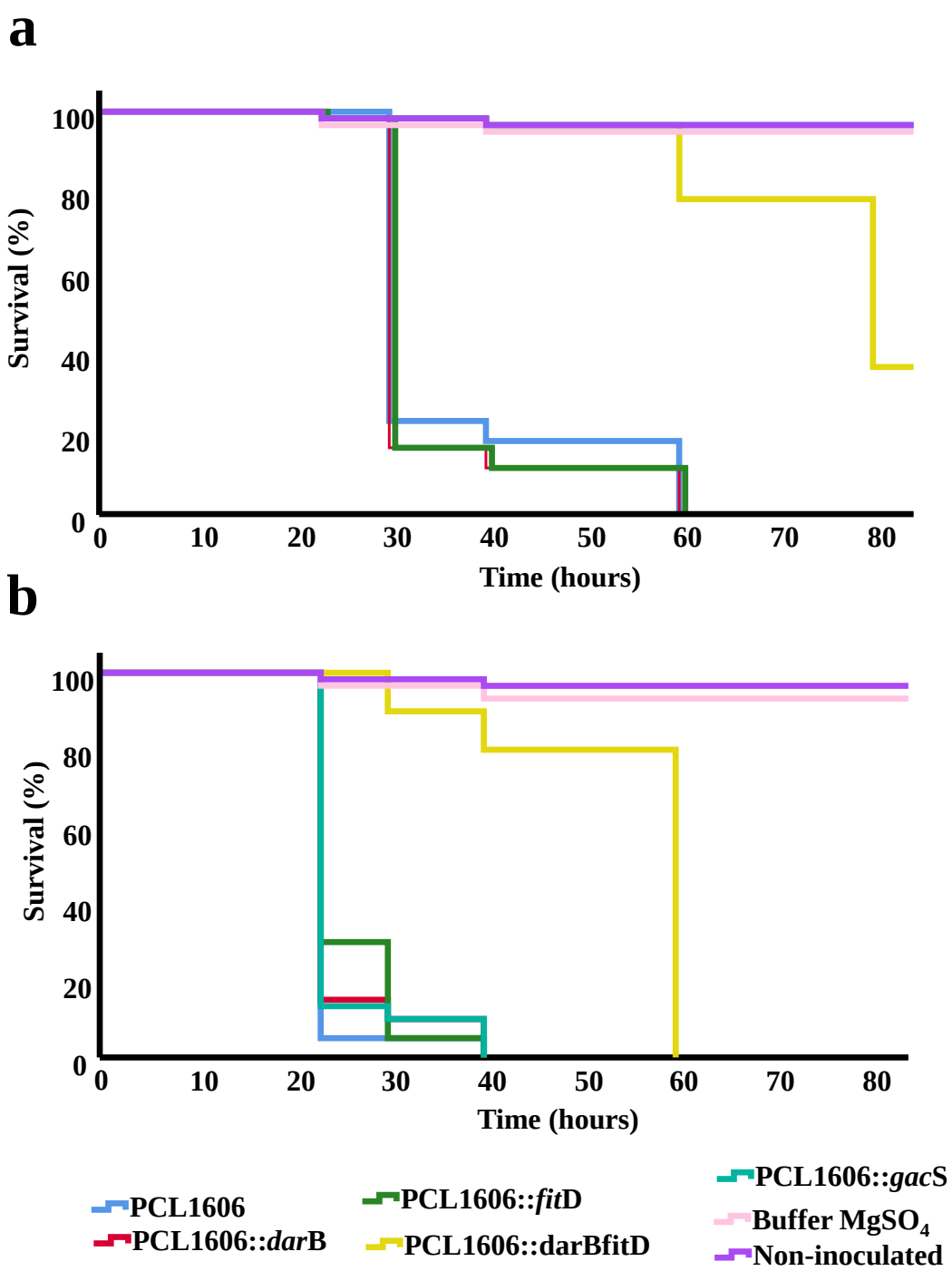

Fig. S3 Kaplan-Meier survival curves of *Galleria mellonella* larvae infected with the wild-type *Pseudomonas chlororaphis* PCL1606 and diferent derivative strains. Larvae (n = 20, per group) were injected with a) 3×10^3 or b) 3×10^5 cfu/mL per tested bacteria. Control groups consisted of larvae treated with a 10 µl dose of buffer $MgSO_4$ (10 mM). Survival was monitored every 12-24 h over a period of 80 h. Data are pooled from a minimum of three independent experiments. Injection with the wild-type and derivative single mutant strains resulted in significantly higher mortality rate compared to injection with the control strains and with the double mutant in *fitD* and *darB genes* ($P<0.05$, log rank test).

Survival data were plotted using the Kaplan–Meier method and comparisons between groups were made using the log-rank test using IBM SPSS statistics v 25