

Table S1. Bacterial strains used in this study.

Number	Strain	Description	Source
<i>Pseudomonas aeruginosa</i> strains			
LD0	UCBPP-PA14 (WT)	Clinical isolate UCBPP-PA14	(1)
LD24	Δphz (also referred to as $\Delta phz1/2$)	PA14 with the <i>phzA1-G1</i> (PA14_09480-PA14_09410) and <i>phzA2-G2</i> (PA14_39970-PA14_39880) operons deleted	(2)
LD3692	$\Delta phzH$	PA14 with <i>phzH</i> (PA14_00640) deleted	(3)
LD3739	$\Delta phzMS$	PA14 with <i>phzM</i> (PA14_09490) and <i>phzS</i> (PA14_09400) deleted	(3)
LD3746	$\Delta phzHMS$	PA14 with <i>phzH</i> (PA14_00640), <i>phzM</i> (PA14_09490), and <i>phzS</i> (PA14_09400) deleted	(4)
LD64	BigBlue (<i>phzM+</i>)	DKN370; PA14 merodiploid strain containing an extra copy of <i>phzM</i> (PA14_09490)	(5)
LD3192	$\Delta rpoS$	PA14 with <i>rpoS</i> (PA14_17480) deleted	This study
LD3193	$\Delta rpoS\Delta phz$	PA14 with <i>rpoS</i> (PA14_17480) and the <i>phz1</i> (PA14_09480-PA14_09410) and <i>phz2</i> (PA14_39970-PA14_39880) operons deleted	This study
LD3469	$\Delta rpoS\Delta phzHMS$	PA14 with <i>rpoS</i> (PA14_17480), <i>phzH</i> (PA14_00640), <i>phzM</i> (PA14_09490), and <i>phzS</i> (PA14_09400) deleted	This study
LD3674	Δcrc	PA14 with <i>crc</i> (PA14_70390) deleted	This study
LD3675	$\Delta crc\Delta phz$	PA14 with <i>crc</i> (PA14_70390) and the <i>phz1</i> (PA14_09480-PA14_09410) and <i>phz2</i> (PA14_39970-PA14_39880) operons deleted	This study
LD3717	$\Delta rpoS\Delta crc$	PA14 with <i>rpoS</i> (PA14_17480) and <i>crc</i> (PA14_70390) deleted	This study
LD3190	$\Delta rpoN$	PA14 with <i>rpoN</i> (PA14_57940) deleted	This study
LD3870	PA14 attB::P <i>crc-mScarlet</i>	PA14 containing a construct in the <i>attB</i> site that expresses <i>mScarlet</i> under control of the 500bp region upstream of	This study

		<i>crc</i> (PA14_17480)	
LD4082	PA14 attB::P <i>crcZ-mScarlet</i>	PA14 containing a construct in the <i>attB</i> site that expresses <i>mScarlet</i> under control of the 350bp region upstream of <i>crcZ</i> (Unannotated between PA14_62540 and PA14_62560. Annotated as PA4726.11 in PAO1)	This study
LD3941	Δ <i>rpoS</i> attB::P <i>crc-mScarlet</i>	Δ <i>rpoS</i> (PA14_17480) containing a construct in the <i>attB</i> site that expresses <i>mScarlet</i> under control of the 500bp region upstream of <i>crc</i> (PA14_17480)	This study
LD4108	Δ <i>rpoS</i> attB::P <i>crcZ-mScarlet</i>	Δ <i>rpoS</i> (PA14_17480) containing a construct in the <i>attB</i> site that expresses <i>mScarlet</i> under control of the 350bp region upstream of <i>crcZ</i> (Annotated as PA4726.11 in PAO1)	This study
LD4498	Δ <i>cbrB</i> attB::P <i>crcZ-mScarlet</i>	PA14 attB::P <i>crcZ-mScarlet</i> , with <i>cbrB</i> (PA14_62540) deleted	This study
LD4501	Δ <i>rpoSΔ<i>cbrB</i> attB::P<i>crcZ-mScarlet</i></i>	PA14 attB::P <i>crcZ-mScarlet</i> , with <i>cbrB</i> (PA14_62540) and <i>rpoS</i> (PA14_17480) deleted	This study
LD4499	PA14 attB::PTL <i>phzM-mScarlet</i>	PA14 containing a construct in the <i>attB</i> site in which the 695 bp upstream region and first 6 codons of <i>phzM</i> (PA14_09490) are fused to <i>mScarlet</i>	This study
LD4502	Δ <i>rpoS</i> attB::PTL <i>phzM-mScarlet</i>	Δ <i>rpoS</i> (PA14_17480) containing a construct in the <i>attB</i> site in which the 695 bp upstream region and first 6 codons of <i>phzM</i> (PA14_09490) are fused to <i>mScarlet</i>	This study
LD4582	Δ <i>crc</i> attB::PTL <i>phzM-mScarlet</i>	Δ <i>crc</i> (PA14_17480) a construct in the <i>attB</i> site in which the 695 bp upstream region and first 6 codons of <i>phzM</i> (PA14_09490) are fused to <i>mScarlet</i>	This study
<i>E. coli</i> strains			
LD44	UQ950	<i>E. coli</i> DH5 α λ (pir) host for cloning; F- Δ (<i>argF-lac</i>)169 Φ 80 <i>dlacZ58</i> (Δ M15) <i>glnV44</i> (AS) <i>rfbD1</i> <i>gyrA96</i> (NalR) <i>recA1</i> <i>endA1</i> <i>spoT1</i> <i>thi-1</i> <i>hsdR17</i> <i>deoR</i> λ pir+	D. Lies
LD661	BW29427	Donor strain for conjugation: <i>thrB1004 pro</i>	W. Metcalf

		<i>thi rpsL hsdS lacZ</i> ΔM15RP4–1360 Δ(<i>araBAD</i>)567 Δ <i>dapA</i> 1341::[<i>erm pir</i> (wt)]	
LD2901	S17-1	Donor strain for conjugation: Str ^R , Tp ^R , F- RP4-2-Tc::Mu <i>aphA</i> ::Tn7 <i>recA</i> λpir lysogen	R. Simon
<i>Saccharomyces cerevisiae</i> strains			
LD676	InvSc1	<i>MATα/MATα leu2/leu2 trp1-289/trp1-289</i> <i>ura3-52/ura3-52 his3-Δ1/his3-Δ1</i>	Invitrogen

Table S2. Plasmids used in this study.

Plasmid Name	Description	Source
pMQ30	Yeast-based allelic-exchange vector; <i>sacB</i> ⁺ , CEN/ARSH, URA3 ⁺ , Gm ^R .	(6)
pFLP2	Site-specific excision vector with cl857-controlled FLP recombinase. encoding sequence, <i>sacB</i> ⁺ , Amp ^R . Used to insert LD3208-based plasmids into <i>P. aeruginosa</i> strains.	(7)
pLD3208	Gm ^R , Tet ^R flanked by Flp recombinase target (FRT) sites to resolve out resistance cassettes.	(8)
pLD3471	Δ <i>rpoS</i> (<i>PA14_17480</i>) PCR fragment introduced into pMQ30 by gap repair cloning in yeast strain InvSc1.	This study
pLD3473	Δ <i>rpoN</i> (<i>PA14_57940</i>) PCR fragment introduced into pMQ30 by gap repair cloning in yeast strain InvSc1.	This study
pLD3673	Δ <i>crc</i> (<i>PA14_70390</i>) PCR fragment introduced into pMQ30 by gap repair cloning in yeast strain InvSc1.	This study
pLD3869	500 bp upstream of <i>crc</i> (<i>PA14_70390</i>) PCR fragment ligated into pLD3208 using <i>SpeI</i> and <i>XhoI</i> .	This study
pLD4645	350 bp upstream of <i>crcZ</i> (annotated as <i>PA4726.11</i> in PAO1) PCR fragment ligated into pLD3208 using <i>SpeI</i> and <i>XhoI</i> .	This study
pLD4179	695 bp upstream and first six codons of <i>phzM</i> (<i>PA14_09490</i>) PCR fragment ligated into pLD3208 using <i>EcoRI</i> and <i>SphI</i> .	This study

Table S3. Primers used in this study.

Primer Number	Sequence
Primers for plasmid pLD3471 (used to make $\Delta rpoS$)	
LD2560	ggaattgtgagcggataacaatttcacacaggaaacagct TGGATAAGGGGGAAGGATTG
LD2561	CCGTTCTTCTCCAGGATCTC CGGCCCTTCTTTTTTGAGTGC
LD2562	GCACTCAAAAAAGAAGGGCCG GAGATCCTGGAGAAGAACGG
LD2563	aggcaaattctgtttatcagaccgcttctgcttctgat AAACCACCAGCCTGCCGCAC
Primers for plasmid pLD3473 (used to make $\Delta rpoN$)	
LD2568	ggaattgtgagcggataacaatttcacacaggaaacagct CGCGCCCGCGCATCGACATG
LD2569	CACCAGTCGCTTGCGCTC CATCTTGAGGACTAGCGATGG
LD2570	CCATCGCTAGTCCTCAAGATG GAGCGCAAGCGACTGGTG
LD2571	aggcaaattctgtttatcagaccgcttctgcttctgat CAGGGCGCGCTGCGCCAGGT
Primers for plasmid pLD3673 (used to make Δcrc)	
LD3184	ggaattgtgagcggataacaatttcacacaggaaacagct GCCCTTGTCGTTGACGTAGC
LD3185	TCGACGATCAGCGGCGCATGC CCGCAGCCTGAATACCATTAC
LD3186	GTGAATGGTATTCAGGCTGCG GCATGCGCCGCTGATCGTCA
LD3197	aggcaaattctgtttatcagaccgcttctgcttctgatTCGGCGAGAACACCCTGTAC
Primers for plasmid pLD3869 (used to make <i>Pcrc-mScarlet</i>)	
LD3273	tcccgacgggcccgtaccaGATGATCTGCATCACTTCG
LD3274	tcttaaacttagactcgaggAAATGGCCCCCAAATCAC
Primers for plasmid pLD4645 (used to make <i>PcrcZ-mScarlet</i>)	
LD3663	acgtacactagtCACCTGCAACCTGTTACC
LD3272	tcttaaacttagactcgaggCAATACATAAGCAGATGCCGTGCC
Primers for plasmid pLD4179 (used to make <i>PTLphzM-mScarlet</i>)	
LD3975	acgtacgtacGAATTCGCGCCGCCTCCGAGA
LD3660	ctccttactaagattcgaattattcatctttattc

LD3751	ttcgaatcttagtaaaggagaagctgtg
LD3976	acgtacgtacGCATGCccagtcaggagctcataaaac

Supplementary references

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