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Article

Biocontrol of Biofilm Formation: Jamming Sessile-Associated Rhizobial Communication by Rhodococcal Quorum-Quenching

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Supplementary Material

TABLE S1. Bacterial strains and plasmids used in this study

Strain or plasmid	Relevant characteristic(s)	Source or reference
Rhizobium rhizogenes		
5520^T	Type strain of *Rhizobium rhizogenes* species	Strain CFBP
5520^T(pHC60-*gfp*)	5520^T transformed by the pHC60 vector containing the *gfp* gene to label bacteria in green fluorescence; Tet^r	This study
Rhodococcus erythropolis		
R138	AHL-degrading isolate obtained from hydroponic culture of potato plants	[54]
R138 Δ*qsdA*	R138 with a 813 bp fragment deleted from the *qsdA* gene	[61]
R138 Δ*qsdA* (pEPR1-*mcherry)*	R138 Δ*qsdA* transformed by the pEPR1 *mcherry* plasmid to tag bacteria in red fluorescence; Km^r	[53]
R138 (pEPR1-*qsdR*-P*qsd::gfp*$_{uv}$-*mcherry)*	R138 strain transformed by pEPR1 *qsdR*-P*qsd::gfp*$_{uv}$-*mcherry* containing the transcriptional	[53]

	fusion P*qsd*::*gfp*$_{uv}$ to monitor the quorum quenching activity; Km^r	
Pectobacterium atrosepticum		
6276	Potato soft rot pathogen, AHL producer	Strain CFBP, [106]
6276-EI	*luxI (syn. expI)* mutant derivative of CFBP 6276 strain unable to produce AHLs; Gm^r	[58]
6276-EI (pME6000-*luxR*-P$_{luxI}$::*gfp-cfp)*	*luxI (syn. expI)* mutant derivative of CFBP 6276 strain transformed by pME6000-*luxR*- P$_{luxI}$::*gfp-cfp* to monitor the quorum sensing activity; Tc^r	[38]
Escherichia coli		
DH5α	Host for cloning; SupE44 ΔlacU169 (Φ80lacZΔM15) hsdR17 recA1 endA1 gyrA96 thi-1 relA1	Lab. collection
DH5α(pUC19)	Strain DH5α carrying pUC19; Ap^R	[61]
DH5α(pUC19-*qsdA*)	QsdA-expressing DH5α; Ap^R	[61]
DH5α(pUC19-*qsdA-mCherry*	QsdA and mCherry expressing DH5α; Ap^R	This study
BL21 (DE3)	Strain transformed by the overexpression plasmid pET22-*qsdA* containing the lactonase encoding gene *qsdA*	[105]
Plasmids		
pHC60-*gfp*	Vector constitutively expressing the GFP	[104]
pME6000	Cloning vector, derivative of pVS1, low copy; Tc^r	[107]
pME6000 *luxR*-P$_{luxI}$::*gfp$_{asv}$-cfp*	pME6000-*cfp* with a P$_{luxI}$::*gfp$_{asv}$* transcriptional fusion under the control of *luxR* expression; Tc^r	This study
pEPR1	Shuttle promoter-probe vector carrying the promoterless *gfp*$_{uv}$ reporter gene; Km^r	[108]
pEPR1-*mcherry*	pEPR1 vector containing a *mCherry* cassette under constitutive promoter; Km^r	This study
pEPR1-*qsdR*-P*qsd*::*gfp*$_{uv}$-*mcherry*	pEPR1-*mcherry* with a P*qsd*::*gfp*$_{uv}$ transcriptional fusion under the control of QsdR; Km^r	[53]
pET22-*qsdA*	Overexpression vector containing the *qsdA* gene; Ap^R	[105]
pUC19	Cloning vector for *E. coli*; Ap^R	Lab. collection
pUC19-*qsdA*	pUC19 containing the *qsdA* gene; Ap^R	[61]
pUC19-*mCherry*	Plasmid containing a mcherry cassette under constitutive promoter; Ap^R	This study

pUC19-*qsdA-mCherry*	Plasmid containing the *qsdA* gene and a mcherry cassette under constitutive promoter; Ap^R	This study

Km^r, Ap^r, Gm^r and Tc^r indicate resistance to kanamycin, ampicillin, gentamycin and tetracycline, respectively. AHL, *N*-acyl homoserine lactone. CFBP, Collection Française de Bactéries associées aux Plantes, Institut National de Recherche pour l'Agriculture, l'alimentation et l'Environnement (INRAE), Angers, France. FERA: The Food and Environment Research Agency, York, U.K.

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