N-acyl homoserine lactones and Lux solos regulate social behaviour and virulence of *Pseudomonas syringae pv. actinidiae*

Microbial Ecology

Authors:

Cellini Antonio[1], Donati Irene[1], Fiorentini Luca[1], Vandelle Elodie[2], Polverari Annalisa[2], Venturi Vittorio[3], Buriani Giampaolo[1], Vanneste Joel L.[4], Spinelli Francesco[1]

1 – Alma Mater Studiorum – Università di Bologna, Department of agricultural and food science, Bologna, Italy

2 – Università degli Studi di Verona, Department of biotechnology, Verona, Italy

3 – International Centre for Genetic Engineering and Biotechnology, Trieste, Italy

4 – The New Zealand Institute for Plant & Food Research, Hamilton, New Zealand

Corresponding Author:

prof. Francesco Spinelli (francesco.spinelli3@unibo.it)

Online Resource 1

List of *Pseudomonas syringae* pv. *actinidiae* genes putatively responding to cell density and/or implied in social behaviour

Gene	Source organism	% Identity in Psa	Functional group	RefSeq ID	Notes	Examples of QS regulation	Forward primer	Reverse primer
psaR1	*Pseudomonas syringae* pv. *actinidiae*	-	signalling	WP_003378621.1		[27]	ATACCTGGTCAGTAGTCTCA	GCAGCACTTCAAGTTCAC
psaR2	*Pseudomonas syringae* pv. *actinidiae*	-	signalling	WP_003379651.1			ACTGTTTGACCAGAAGATG	CTGAACGGTTGAGTTGAT
psaR3	*Pseudomonas syringae* pv. *actinidiae*	-	signalling			[27]	GGTTCGCTCATTATCTGAT	GCAATGCTTGAGGATAGG
fliP	*Pseudomonas putida* W619	82	motility	WP_005616850.1		[61]	TCAAGACGGCGTTTCAGA	CGGCGAGAGCATCATCAT
pilA	*Pseudomonas syringae* pv. *tabaci*	92	motility	WP_020315304.1		[62,63]	GCCATTCCTTCCTATCAA	GTAAGACCATTGCTCCAG
pilC	*Pseudomonas syringae* pv. *tomato* DC3000	90	motility	WP_017684779.1	type 2 secretion system F family protein		CGCTGGACATCGCATTCT	GCACCTTCGGCAATGATG
pilO	*Pseudomonas aeruginosa* PAO1	75	motility	WP_003378849.1	type 4a pilus biogenesis lipoprotein PilP		CCTACAGAAAGCAGATGGA	GTGATGTCTTCAAGCAGTC
avrPto1	*Pseudomonas syringae* pv. *actinidiae*	-	virulence	WP_003381016.1	AvrPto1-like protein	[64]	GGAGCGAATCTTGCCATT	GGAGCGATATGCGTGAAG
hopD1	*Pseudomonas syringae* pv. *actinidiae*	-	virulence	WP_074291453.1	effector protein AvrPphD	[64]	CAGTAGACAGCAGTAGCC	CGGGTTATCGGAAACAAG
hopS2	*Pseudomonas syringae* pv. *actinidiae*	-	virulence	WP_074291270.1		[64]	CCTTAAACGGCTGGCAGAG	CGAAGTGATGCTTGAGGTGAA
hopZ5	*Pseudomonas syringae* pv. *actinidiae*	-	virulence	WP_020314360.1		[64]	TCAGGCTACAATACTTACGCATCA	CAGGAATAGAACGGAACTCAGGAT
algD	*Pseudomonas syringae pv. tomato* DC3000	99	cell aggregation	WP_017683639.1	GDP-mannose 6-dehydrogenase	[65]	GACCTGGAACTGGACTACATC	TGCTGCGAACCACGATAG
wspR	*Pseudomonas fluorescens* SBW25	85	cell aggregation	WP_003377727.1	PleD family two-component system response regulator; di-guanylate cyclase		ACGACTATCTGGTCAAACTG	ATAGGCTTCATCACGCTG
wssB	*Pseudomonas fluorescens* SBW25	68	cell aggregation	WP_017683352.1		[66]	CGCTGGTGATGATGATGGT	CTGACGCTCAACGCTGTG
rhlA	*Pseudomonas syringae* pv. *syringae* B728a	70	Biosurfactant production	WP_032607202.1	alpha/beta hydrolase	[67]	AGCTGCTTTTGGCGATGTAG	AGATTCCGGTGCTGTTCATC
syfA	*Pseudomonas syringae pv. syringae* B728a	84	Biosurfactant production	WP_017699501.1	non-ribosomal peptide synthase		TGCAACTGGACGAAGAAGAG	TCGTCGATCAGCACATTCAG
recA	*Pseudomonas syringae* pv. *actinidiae*	-		WP_004397594.1			CGCACTTGATCCTGAATACG	CATGTCGGTGATTTCCAGTG
rpoD	*Pseudomonas syringae* pv. *actinidiae*	-		WP_017683803.1			CCGAGATCAAGGACATCAAC	GAGATCACCAGACGCAAGTT