

Distribution and diversity of bacterial endophytes from four *Pinus* species and their efficacy as biocontrol agents for devastating pine wood nematodes

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Supplementary Table S1. Overview of the geographic location and its meta-data of 18 sampling sites in Korea.

<i>Pinus</i> sp.	Region	Symbol	Estimated	Available	Electrical	Latitude	Longitude	pH	Available	Organic	Mean	Mean	Mg	Ca	K	Altitude
			tree age	silicic acid (mg/kg)	conductivity				phosphate (mg/kg)	matter (g/kg)	Temp. (°C) 2016	rainfall (mm) 2016	(cmol+/kg)			(meter)
<i>Pinus rigida</i>	Anseong	Pr 1	45	123.2	0.4	37.074458	127.11192	5.9	252.4	20.8	25.5	284	1.7	4.2	0.7	70
	Seosan	Pr 2	45	75.9	1.1	36.8906971	126.449172	6.1	336.6	22.3	25.2	295.6	2.4	6.6	1.1	60
	Jungeup	Pr 3	45	7.9	0.2	35.5521138	127.019157	5.3	892.7	30.4	27.1	205.1	1.9	5.8	1	240
	Yungyang	Pr 4	43	96.2	0.1	36.6061179	129.088533	6.1	251.2	21.4	23	323.9	2.8	7.4	0.8	250
<i>Pinus densiflora</i>	Jungeup	Pd 1	50	7.9	0.2	35.5565492	126.98662	5.3	892.7	30.4	27.1	205.1	1.9	5.8	1	310
	Jejudo	Pd 2	50	0	1.7	33.3737599	126.471605	5.3	591.7	50.6	27.4	98.6	1.8	4.6	1.2	1030
	Hoengseong	Pd 3	45	48.9	0.8	37.5098629	128.160384	5.7	547.2	30.2	25.7	360.1	1.1	3.7	0.8	540
	Bonghoa	Pd 4	35	11.2	0.4	37.0054026	128.941595	6.1	571.7	27	25.9	416.5	1.5	5.5	0.9	700
	Yangpung	Pd 5	50	248.8	0.6	37.6118298	127.44368	6	299.6	24.4	25.4	385	1.1	5.1	0.5	300
<i>Pinus thunbergii</i>	Pohang	Pt 1	40	116.3	0.5	36.1205372	129.411768	5.6	153.3	22.1	25.9	113.2	2.5	6.9	0.5	1010
	Jejudo	Pt 2	45	0.1	38.7	33.4729632	126.500568	5.3	464	55.7	27.4	98.6	2	5.5	12	30
	Seosan	Pt 3	50	75.9	1.1	36.8766539	126.38679	6.1	336.6	22.3	25.2	295.6	2.4	6.6	1.1	40
	Gangneung	Pt 4	35	49.6	0.3	37.916556	128.810361	5.6	667.1	25.3	24.1	424.2	1.2	3.3	0.6	10
	Yeosu	Pt 5	45	81	0.8	34.7087622	127.760002	6.1	526.2	31.9	25.3	157.8	1.6	6.4	0.8	30
<i>Pinus koraiensis</i>	Hongchun	Pk 1	30	138.4	0.4	37.8073347	127.929426	5.8	217.9	21.7	25.3	429.4	1.1	4.2	0.4	470
	Jecheon	Pk 2	30	70.8	0.2	37.1883303	127.983829	5.8	320.5	25.5	24.1	419.7	1.8	5.6	0.7	320
	Chuncheon	Pk 3	35	30.1	0.6	37.9058734	127.931245	6.2	302.6	30.2	25.2	617.1	1.6	4.1	0.6	250
	Pocheon	Pk 4	50	72.4	0.4	37.9654135	127.112321	5.7	237.3	21.3	25.1	366.3	0.9	3.9	0.9	120

Supplementary Table S2. Identification of putative bacterial endophytes isolated from four *Pinus* species in Korea based on 16S ribosomal DNA sequence. H and M stand for HV and MRS media, respectively.

Isolate	Reference strain	with Accession No.	Phylum	Similarity
H16	<i>Serratia liquefaciens</i>	CP006252.1	<i>Gammaproteobacteria</i>	99%
H19	<i>Klebsiella</i> sp.	DQ831003.2	<i>Gammaproteobacteria</i>	100%
H21	<i>Rhodococcus</i> sp.	JX564535.1	<i>Actinobacteria</i>	99%
H25	<i>Raoultella</i> sp.	KU362619.1	<i>Gammaproteobacteria</i>	97%
H28	<i>Rhodococcus</i> sp.	AY864650.1	<i>Actinobacteria</i>	99%
H31	<i>Microbacterium paraoxydans</i>	LT629770.1	<i>Actinobacteria</i>	99%
H35	<i>Cedecea davisae</i>	AB682275.1	<i>Gammaproteobacteria</i>	99%
H38	<i>Phyllobacterium</i> sp.	KM253051.1	<i>Alphaproteobacteria</i>	99%
H46	<i>Pseudomonas hibiscicola</i>	KP208626.1	<i>Gammaproteobacteria</i>	99%
H73	<i>Pseudomonas</i> sp.	KM253253.1	<i>Gammaproteobacteria</i>	99%
H75	<i>Mycobacterium rufum</i>	KU341399.1	<i>Actinobacteria</i>	100%
H77	<i>Pseudomonas</i> sp.	MF144536.1	<i>Gammaproteobacteria</i>	99%
H79	<i>Agrobacterium rubi</i>	KR708890.1	<i>Alphaproteobacteria</i>	99%
H81	<i>Microbacterium</i> sp.	LC133735.2	<i>Actinobacteria</i>	99%
H84	<i>Pseudomonas extremorientalis</i>	LT629708.1	<i>Gammaproteobacteria</i>	99%
H85	<i>Microbacterium</i> sp.	JX566572.1	<i>Actinobacteria</i>	99%
H86	<i>Microbacterium</i> sp.	KF261555.1	<i>Actinobacteria</i>	99%
H88	<i>Nocardia globerula</i>	NR_104795.1	<i>Actinobacteria</i>	99%
H90	<i>Rhizobium</i> sp.	KM253034.1	<i>Alphaproteobacteria</i>	99%
H92	<i>Pseudomonas lutea</i>	AB495128.1	<i>Gammaproteobacteria</i>	99%
H93	<i>Enterobacter</i> sp.	AJ489826.1	<i>Gammaproteobacteria</i>	99%
H102	<i>Phyllobacterium myrsinacearum</i>	AB681130.1	<i>Alphaproteobacteria</i>	99%
H103	<i>Kluyvera cryocrescens</i>	KC355278.1	<i>Gammaproteobacteria</i>	99%
H106	<i>Bacillus megaterium</i>	LT797523.1	<i>Firmicutes</i>	99%
H108	<i>Bacillus megaterium</i>	CP018874.1	<i>Firmicutes</i>	99%
H110	<i>Bosea</i> sp.	LC133745.2	<i>Alphaproteobacteria</i>	99%
H111	<i>Acinetobacter</i> sp.	KC128833.1	<i>Gammaproteobacteria</i>	99%
H113	<i>Raoultella ornithinolytica</i>	CP021329.1	<i>Gammaproteobacteria</i>	99%
H115	<i>Bacillus</i> sp.	AB043843.1	<i>Firmicutes</i>	99%
H126	<i>Paenibacillus</i> sp.	AB746849.1	<i>Firmicutes</i>	98%
H132	<i>Enterobacter ludwigii</i>	KC355281.1	<i>Gammaproteobacteria</i>	99%

H136	<i>Mycobacterium</i> sp.	CP015596.1	<i>Actinobacteria</i>	99%
H137	<i>Stenotrophomonas rhizophila</i>	KY474340.1	<i>Gammaproteobacteria</i>	99%
H139	<i>Stenotrophomonas rhizophila</i>	GU186108.1	<i>Gammaproteobacteria</i>	99%
H140	<i>Ochrobactrum</i> sp.	LC150701.1	<i>Alphaproteobacteria</i>	99%
H141	<i>Neorhizobium galegae</i>	HG938355.1	<i>Alphaproteobacteria</i>	97%
H146	<i>Burkholderia cepacia</i>	KX055886.1	<i>Betaproteobacteria</i>	99%
H148	<i>Microbacterium paraoxydans</i>	KY425786.1	<i>Actinobacteria</i>	99%
H152	<i>Acinetobacter</i> sp.	KY228963.1	<i>Gammaproteobacteria</i>	99%
H154	<i>Ralstonia</i> sp.	KY906998.1	<i>Betaproteobacteria</i>	96%
H155	<i>Ewingella</i> sp.	AB766012.1	<i>Gammaproteobacteria</i>	99%
H158	<i>Raoultella</i> sp.	KX130779.2	<i>Gammaproteobacteria</i>	99%
H160	<i>Acinetobacter</i> sp.	JN605359.1	<i>Gammaproteobacteria</i>	100%
H161	<i>Stenotrophomonas</i> sp.	KT580577.1	<i>Gammaproteobacteria</i>	99%
H163	<i>Rhodococcus boritolerans</i>	AB288061.1	<i>Actinobacteria</i>	99%
H164	<i>Raoultella ornithinolytica</i>	CP017802.1	<i>Gammaproteobacteria</i>	99%
H166	<i>Pseudomonas rhodesiae</i>	KU321261.1	<i>Gammaproteobacteria</i>	99%
H170	<i>Bacillus circulans</i>	KF475811.1	<i>Firmicutes</i>	99%
H177	<i>Pseudomonas putida</i>	LT707061.1	<i>Gammaproteobacteria</i>	99%
H178	<i>Stenotrophomonas maltophilia</i>	JN084034.1	<i>Gammaproteobacteria</i>	98%
H180	<i>Phyllobacterium myrsinacearum</i>	KJ147062.1	<i>Alphaproteobacteria</i>	99%
H186	<i>Pseudomonas putida</i>	KX817279.1	<i>Gammaproteobacteria</i>	99%
H188	<i>Achromobacter xylosoxidans</i>	KP967463.1	<i>Betaproteobacteria</i>	99%
H192	<i>Enterobacter ludwigii</i>	KC355280.1	<i>Gammaproteobacteria</i>	99%
H193	<i>Enterobacter</i> sp.	KF803325.1	<i>Gammaproteobacteria</i>	99%
H195	<i>Paenibacillus</i> sp.	JX402418.1	<i>Firmicutes</i>	99%
H197	<i>Arthrobacter</i> sp.	KY511276.1	<i>Actinobacteria</i>	99%
H206	<i>Methylobacterium komagatae</i>	AB703238.1	<i>Alphaproteobacteria</i>	99%
H213	<i>Acinetobacter</i> sp.	KC858868.1	<i>Gammaproteobacteria</i>	99%
H217	<i>Enterobacter aerogenes</i>	CP014748.1	<i>Gammaproteobacteria</i>	99%
H218	<i>Microbacterium foliorum</i>	CP019892.1	<i>Actinobacteria</i>	99%
H220	<i>Pseudomonas</i> sp.	JF274936.1	<i>Gammaproteobacteria</i>	99%
H224	<i>Ewingella americana</i>	HE585222.1	<i>Gammaproteobacteria</i>	99%
H228	<i>Achromobacter spanius</i>	LN890048.1	<i>Betaproteobacteria</i>	99%
H229	<i>Rhizobium huautlense</i>	KC355318.1	<i>Alphaproteobacteria</i>	99%
H230	<i>Serratia liquefaciens</i>	CP014017.1	<i>Gammaproteobacteria</i>	99%
H231	<i>Rhodococcus</i> sp.	CP017299.1	<i>Actinobacteria</i>	99%

H235	<i>Enterobacter ludwigii</i>	KM077046.1	<i>Gammaproteobacteria</i>	99%
H236	<i>Pseudomonas</i> sp.	KF312476.1	<i>Gammaproteobacteria</i>	100%
H238	<i>Micrococcus</i> sp.	KP345967.1	<i>Actinobacteria</i>	98%
H240	<i>Achromobacter pestifer</i>	HG324051.1	<i>Betaproteobacteria</i>	99%
H242	<i>Pantoea agglomerans</i>	CP014129.1	<i>Gammaproteobacteria</i>	99%
H248	<i>Pantoea</i> sp.	KF479585.1	<i>Gammaproteobacteria</i>	99%
H250	<i>Enterobacter</i> sp.	JX067653.1	<i>Gammaproteobacteria</i>	99%
H263	<i>Enterobacter</i> sp.	AB673456.1	<i>Gammaproteobacteria</i>	99%
H268	<i>Pseudomonas lurida</i>	AJ581999.1	<i>Gammaproteobacteria</i>	100%
H269	<i>Mycobacterium septicum</i>	NR_042916.1	<i>Actinobacteria</i>	99%
H274	<i>Achromobacter</i> sp.	LC133607.2	<i>Betaproteobacteria</i>	99%
H276	<i>Xanthomonas gardneri</i>	CP018731.1	<i>Gammaproteobacteria</i>	99%
H277	<i>Rhizobium</i> sp.	AM403584.1	<i>Alphaproteobacteria</i>	100%
H279	<i>Mycobacterium</i> sp.	AB613819.1	<i>Actinobacteria</i>	99%
H282	<i>Ralstonia</i> sp.	KT183537.1	<i>Betaproteobacteria</i>	99%
H285	<i>Pseudomonas veronii</i>	LT599583.1	<i>Gammaproteobacteria</i>	100%
H286	<i>Pseudomonas putida</i>	KF010369.1	<i>Gammaproteobacteria</i>	100%
H297	<i>Enterobacter</i> sp.	LC007924.1	<i>Gammaproteobacteria</i>	100%
H298	<i>Pseudomonas</i> sp.	JF740045.1	<i>Gammaproteobacteria</i>	99%
H303	<i>Klebsiella pneumoniae</i>	FN689724.1	<i>Gammaproteobacteria</i>	99%
H310	<i>Arthrobacter</i> sp.	EU036697.1	<i>Actinobacteria</i>	99%
H312	<i>Variovorax</i> sp.	EU934231.1	<i>Betaproteobacteria</i>	99%
H318	<i>Cupriavidus basilensis</i>	AY047217.1	<i>Betaproteobacteria</i>	99%
H323	<i>Achromobacter mucicolens</i>	KT716268.1	<i>Betaproteobacteria</i>	99%
H324	<i>Ochrobactrum pseudogrignonense</i>	CP015776.1	<i>Alphaproteobacteria</i>	99%
H326	<i>Pantoea hericii</i>	KU189725.1	<i>Gammaproteobacteria</i>	99%
H327	<i>Rahnella</i> sp.	LC008364.1	<i>Gammaproteobacteria</i>	99%
H329	<i>Enterobacter</i> sp.	JX566614.1	<i>Gammaproteobacteria</i>	99%
H333	<i>Stenotrophomonas maltophilia</i>	LT222224.1	<i>Gammaproteobacteria</i>	99%
H336	<i>Enterobacter asburiae</i>	CP011863.1	<i>Gammaproteobacteria</i>	99%
H338	<i>Paenibacillus</i> sp.	KF011653.1	<i>Firmicutes</i>	99%
H343	<i>Serratia entomophila</i>	NR_025338.1	<i>Gammaproteobacteria</i>	99%
H349	<i>Rhizobium cellulosilyticum</i>	JN412065.1	<i>Alphaproteobacteria</i>	99%
H350	<i>Enterobacter ludwigii</i>	EF175735.1	<i>Gammaproteobacteria</i>	99%
H359	<i>Rhizobium</i> sp.	KF465962.1	<i>Alphaproteobacteria</i>	99%
H367	<i>Rhodococcus</i> sp.	MF351723.1	<i>Actinobacteria</i>	99%

H370	<i>Pseudomonas parafulva</i>	CP009747.1	<i>Gammaproteobacteria</i>	99%
H374	<i>Pseudomonas</i> sp.	CP018743.1	<i>Gammaproteobacteria</i>	100%
H375	<i>Sphingomonas</i> sp.	FN377699.1	<i>Alphaproteobacteria</i>	99%
H381	<i>Roseomonas aerophila</i>	NR_109678.1	<i>Alphaproteobacteria</i>	99%
H390	<i>Micrococcus</i> sp.	KP345951.1	<i>Actinobacteria</i>	99%
H396	<i>Microbacterium paraoxydans</i>	KF783215.1	<i>Actinobacteria</i>	100%
H399	<i>Micrococcus luteus</i>	KT339390.1	<i>Actinobacteria</i>	99%
H402	<i>Bacillus</i> sp.	LC150681.1	<i>Firmicutes</i>	99%
H406	<i>Arthrobacter</i> sp.	JF772504.1	<i>Actinobacteria</i>	99%
H407	<i>Pseudomonas protegens</i>	CP022097.1	<i>Gammaproteobacteria</i>	100%
H408	<i>Serratia marcescens</i>	KP903466.1	<i>Gammaproteobacteria</i>	99%
H410	<i>Achromobacter</i> sp.	KY907012.1	<i>Betaproteobacteria</i>	99%
H411	<i>Microbacterium</i> sp.	KR058846.1	<i>Actinobacteria</i>	99%
M16	<i>Enterobacter</i> sp.	JQ511864.1	<i>Gammaproteobacteria</i>	99%
M19	<i>Raoultella ornithinolytica</i>	CP008886.1	<i>Gammaproteobacteria</i>	99%
M21	<i>Enterobacter aerogenes</i>	KM974656.1	<i>Gammaproteobacteria</i>	99%
M29	<i>Enterobacter</i> sp.	KT887985.1	<i>Gammaproteobacteria</i>	99%
M31	<i>Leclercia adecarboxylata</i>	KC252602.1	<i>Gammaproteobacteria</i>	99%
M35	<i>Leclercia adecarboxylata</i>	HQ242722.1	<i>Gammaproteobacteria</i>	97%
M44	<i>Serratia marcescens</i>	CP011642.1	<i>Gammaproteobacteria</i>	99%
M45	<i>Serratia</i> sp.	KP325087.1	<i>Gammaproteobacteria</i>	99%
M46	<i>Serratia marcescens</i>	KP682489.1	<i>Gammaproteobacteria</i>	99%
M49	<i>Kosakonia cowanii</i>	CP019447.1	<i>Gammaproteobacteria</i>	99%
M65	<i>Serratia marcescens</i>	KX783602.1	<i>Gammaproteobacteria</i>	99%
M72	<i>Serratia</i> sp.	JQ734475.1	<i>Gammaproteobacteria</i>	99%
M81	<i>Serratia liquefaciens</i>	KJ004486.1	<i>Gammaproteobacteria</i>	99%
M82	<i>Serratia liquefaciens</i>	KY643700.1	<i>Gammaproteobacteria</i>	99%
M86	<i>Serratia marcescens</i>	LT575490.1	<i>Gammaproteobacteria</i>	99%
M93	<i>Serratia grimesii</i>	NR_025340.1	<i>Gammaproteobacteria</i>	99%
M94	<i>Raoultella planticola</i>	EU545405.1	<i>Gammaproteobacteria</i>	99%
M96	<i>Enterobacter asburiae</i>	JQ659696.1	<i>Gammaproteobacteria</i>	99%
M104	<i>Citrobacter freundii</i>	CP012554.1	<i>Gammaproteobacteria</i>	99%
M105	<i>Enterobacter</i> sp.	HQ824845.1	<i>Gammaproteobacteria</i>	99%
M106	<i>Serratia proteamaculans</i>	KC951919.1	<i>Gammaproteobacteria</i>	99%
M112	<i>Serratia</i> sp.	KY780231.1	<i>Gammaproteobacteria</i>	99%
M115	<i>Serratia</i> sp.	KU750792.1	<i>Gammaproteobacteria</i>	99%

M116	<i>Citrobacter freundii</i>	KU570343.1	<i>Gammaproteobacteria</i>	99%
M125	<i>Enterobacter</i> sp.	KF010358.1	<i>Gammaproteobacteria</i>	99%
M126	<i>Rahnella aquatilis</i>	KJ004463.1	<i>Gammaproteobacteria</i>	99%
M128	<i>Enterobacter</i> sp.	EU855187.1	<i>Gammaproteobacteria</i>	99%
M129	<i>Cedecea neteri</i>	CP009458.1	<i>Gammaproteobacteria</i>	99%
M130	<i>Enterobacter asburiae</i>	CP007546.1	<i>Gammaproteobacteria</i>	99%
M131	<i>Escherichia coli</i>	CP018770.2	<i>Gammaproteobacteria</i>	99%
M132	<i>Escherichia coli</i>	KY678497.1	<i>Gammaproteobacteria</i>	99%
M133	<i>Pantoea agglomerans</i>	KT765839.1	<i>Gammaproteobacteria</i>	98%
M137	<i>Serratia grimesii</i>	KC167881.1	<i>Gammaproteobacteria</i>	99%
M138	<i>Serratia liquefaciens</i>	CP011303.1	<i>Gammaproteobacteria</i>	99%
M142	<i>Enterobacter aerogenes</i>	CP014029.1	<i>Gammaproteobacteria</i>	99%
M144	<i>Enterobacter aerogenes</i>	KY621520.1	<i>Gammaproteobacteria</i>	99%
M147	<i>Bacillus subtilis</i>	EU096316.1	<i>Firmicutes</i>	99%
M150	<i>Lelliottia</i> sp.	KX822678.1	<i>Gammaproteobacteria</i>	99%
M151	<i>Serratia nematodiphila</i>	KY887771.1	<i>Gammaproteobacteria</i>	99%
M152	<i>Serratia liquefaciens</i>	KU950364.1	<i>Gammaproteobacteria</i>	98%
M154	<i>Lysinibacillus xylanilyticus</i>	KY316397.1	<i>Firmicutes</i>	99%
M161	<i>Hafnia alvei</i>	CP009706.1	<i>Gammaproteobacteria</i>	99%
M163	<i>Leclercia</i> sp.	HM165189.1	<i>Gammaproteobacteria</i>	100%
M164	<i>Escherichia coli</i>	CP020048.1	<i>Gammaproteobacteria</i>	99%
M166	<i>Raoultella ornithinolytica</i>	CP013338.1	<i>Gammaproteobacteria</i>	99%
M167	<i>Rahnella</i> sp.	KF192056.1	<i>Gammaproteobacteria</i>	99%
M168	<i>Enterobacter</i> sp.	KM657475.1	<i>Gammaproteobacteria</i>	100%
M169	<i>Hafnia alvei</i>	KY940341.1	<i>Gammaproteobacteria</i>	99%
M172	<i>Hafnia alvei</i>	KC210858.1	<i>Gammaproteobacteria</i>	99%
M179	<i>Lactococcus lactis</i> subsp.	KC754747.1	<i>Firmicutes</i>	99%
M180	<i>Leuconostoc mesenteroides</i>	LC260033.1	<i>Firmicutes</i>	99%
M181	<i>Leuconostoc</i> sp.	AB690198.1	<i>Firmicutes</i>	99%
M187	<i>Acinetobacter</i> sp.	KY440055.1	<i>Gammaproteobacteria</i>	100%
M188	<i>Yersinia</i> sp.	AJ011333.1	<i>Gammaproteobacteria</i>	99%
M194	<i>Obesumbacterium proteus</i>	CP014608.1	<i>Gammaproteobacteria</i>	99%
M196	<i>Hafnia</i> sp.	AP017469.1	<i>Gammaproteobacteria</i>	99%
M200	<i>Citrobacter freundii</i>	LN854584.1	<i>Gammaproteobacteria</i>	95%
M204	<i>Enterobacter</i> sp.	HQ231920.1	<i>Gammaproteobacteria</i>	99%
M207	<i>Klebsiella</i> sp.	KU193768.1	<i>Gammaproteobacteria</i>	99%

M216	<i>Cedecea davisae</i>	KX062011.1	<i>Gammaproteobacteria</i>	99%
M219	<i>Enterobacter</i> sp.	KF582906.1	<i>Gammaproteobacteria</i>	99%
M228	<i>Raoultella planticola</i>	CP023877.1	<i>Gammaproteobacteria</i>	99%
M230	<i>Klebsiella</i> sp.	CP020657.1	<i>Gammaproteobacteria</i>	99%
M234	<i>Raoultella ornithinolytica</i>	KY317922.1	<i>Gammaproteobacteria</i>	99%
M235	<i>Hafnia alvei</i>	CP015379.1	<i>Gammaproteobacteria</i>	99%
M239	<i>Enterobacter aerogenes</i>	KU726959.1	<i>Gammaproteobacteria</i>	99%
M241	<i>Raoultella ornithinolytica</i>	KY022421.1	<i>Gammaproteobacteria</i>	99%
M242	<i>Enterobacter aerogenes</i>	CP011574.1	<i>Gammaproteobacteria</i>	99%
M243	<i>Bacillus</i> sp.	KJ726746.1	<i>Firmicutes</i>	99%
M244	<i>Kluyvera intermedia</i>	KR054969.1	<i>Gammaproteobacteria</i>	99%
M249	<i>Enterobacter aerogenes</i>	CP011539.1	<i>Gammaproteobacteria</i>	99%
M250	<i>Enterobacter aerogenes</i>	KP716694.1	<i>Gammaproteobacteria</i>	99%
M253	<i>Cedecea neteri</i>	CP009451.1	<i>Gammaproteobacteria</i>	100%
M254	<i>Lelliottia</i> sp.	KJ810589.1	<i>Gammaproteobacteria</i>	99%
M261	<i>Hafnia</i> sp.	KJ781891.1	<i>Gammaproteobacteria</i>	99%
M276	<i>Rahnella aquatilis</i>	KT958515.1	<i>Gammaproteobacteria</i>	96%
M277	<i>Ewingella</i> sp.	KT958490.1	<i>Gammaproteobacteria</i>	99%
M287	<i>Enterobacter ludwigii</i>	KR822481.1	<i>Gammaproteobacteria</i>	100%
M301	<i>Lelliottia amnigena</i>	KT986086.1	<i>Gammaproteobacteria</i>	99%
M318	<i>Lelliottia amnigena</i>	KT986089.1	<i>Gammaproteobacteria</i>	99%
M320	<i>Enterobacter</i> sp.	JQ864377.1	<i>Gammaproteobacteria</i>	99%
M321	<i>Enterobacter</i> sp.	HQ231953.1	<i>Gammaproteobacteria</i>	99%
M323	<i>Enterobacter asburiae</i>	JQ659874.1	<i>Gammaproteobacteria</i>	99%
M324	<i>Enterobacter</i> sp.	AY689045.1	<i>Gammaproteobacteria</i>	96%
M326	<i>Enterobacter</i> sp.	AY689062.1	<i>Gammaproteobacteria</i>	98%
M328	<i>Escherichia coli</i>	CP010228.1	<i>Gammaproteobacteria</i>	99%
M332	<i>Enterobacter</i> sp.	KF010360.1	<i>Gammaproteobacteria</i>	99%
M333	<i>Enterobacter asburiae</i>	KC568144.1	<i>Gammaproteobacteria</i>	99%
M338	<i>Rahnella</i> sp.	JX994143.1	<i>Gammaproteobacteria</i>	99%
M341	<i>Staphylococcus hominis</i>	KX432211.1	<i>Firmicutes</i>	99%
M356	<i>Viridibacillus arenosi</i>	KJ671467.1	<i>Firmicutes</i>	99%
M357	<i>Bacillus</i> sp.	KF956642.1	<i>Firmicutes</i>	99%
M359	<i>Enterobacter</i> sp.	KM253094.1	<i>Gammaproteobacteria</i>	100%
M368	<i>Enterobacter</i> sp.	KF010357.1	<i>Gammaproteobacteria</i>	99%
M369	<i>Lelliottia amnigena</i>	KM114915.1	<i>Gammaproteobacteria</i>	99%

M373	<i>Serratia marcescens</i>	CP013046.2	<i>Gammaproteobacteria</i>	99%
M391	<i>Lysinibacillus</i> sp.	KY774365.1	<i>Firmicutes</i>	99%
M394	<i>Lysinibacillus</i> sp.	JN247743.1	<i>Firmicutes</i>	99%
M402	<i>Yokenella regensburgei</i>	KU161317.1	<i>Gammaproteobacteria</i>	99%
M403	<i>Yokenella</i> sp.	KF874625.1	<i>Gammaproteobacteria</i>	99%
M404	<i>Citrobacter gillenii</i>	NR_041697.1	<i>Gammaproteobacteria</i>	99%
M417	<i>Lelliottia</i> sp.	KY780216.1	<i>Gammaproteobacteria</i>	99%
M419	<i>Lelliottia</i> sp.	KY780217.1	<i>Gammaproteobacteria</i>	99%
M424	<i>Enterobacter asburiae</i>	KY316493.1	<i>Gammaproteobacteria</i>	99%
M426	<i>Serratia liquefaciens</i>	KJ781948.1	<i>Gammaproteobacteria</i>	99%
M431	<i>Serratia</i> sp.	KF201712.1	<i>Gammaproteobacteria</i>	99%
M432	<i>Lelliottia nimipressuralis</i>	KT986079.1	<i>Gammaproteobacteria</i>	99%
M436	<i>Lelliottia</i> sp.	KX709881.1	<i>Gammaproteobacteria</i>	98%
M441	<i>Lelliottia</i> sp.	KM458060.1	<i>Gammaproteobacteria</i>	99%
M448	<i>Serratia liquefaciens</i>	KU999993.1	<i>Gammaproteobacteria</i>	99%
M449	<i>Enterobacter</i> sp.	JQ864388.1	<i>Gammaproteobacteria</i>	99%
M452	<i>Enterobacter amnigenus</i>	AB773290.1	<i>Gammaproteobacteria</i>	99%
M458	<i>Serratia fonticola</i>	KX257354.1	<i>Gammaproteobacteria</i>	99%
M462	<i>Ewingella americana</i>	KT031282.1	<i>Gammaproteobacteria</i>	99%
M465	<i>Ewingella americana</i>	KY126990.1	<i>Gammaproteobacteria</i>	99%
M472	<i>Serratia fonticola</i>	LT555292.1	<i>Gammaproteobacteria</i>	99%
M477	<i>Enterobacter</i> sp.	KJ152098.1	<i>Gammaproteobacteria</i>	99%
M483	<i>Rahnella</i> sp.	KF720928.1	<i>Gammaproteobacteria</i>	99%
M507	<i>Ewingella</i> sp.	KX378906.1	<i>Gammaproteobacteria</i>	99%
M508	<i>Rahnella bruchi</i>	NR_146845.1	<i>Gammaproteobacteria</i>	99%
M511	<i>Rahnella bruchi</i>	KF308407.1	<i>Gammaproteobacteria</i>	98%
M513	<i>Enterobacter ludwigii</i>	JF505955.1	<i>Gammaproteobacteria</i>	99%