

Supplementary Table S4. Blastx of 13 lateral flagellum genes of 10 representative Rhizobiales genomes against the nr NCBI protein database excluding *Rhizobiales* order genomes. Only first 3 genera hits are shown. Best blast hit of each gene is indicated in green.

Gene	Query	Subject species	% identity	% cover.	e-value	Subject Accs. No.
<i>fliR</i>	<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Labrenzia</i> sp. VG12	50%	86%	4.00E-68	WP_094070877.1
		<i>Pannonibacter phragmitetus</i>	44%	96%	6.00E-62	WP_050474407.1
		<i>Polymorphum gilvum</i>	47%	96%	7.00E-56	WP_013654593.1
	<i>Rhodopseudomonas palustris</i> BisA53	<i>Labrenzia alexandrii</i>	50%	97%	6.00E-65	WP_008194671.1
		<i>Pannonibacter phragmitetus</i>	47%	95%	3.00E-61	WP_050474407.1
		<i>Polymorphum gilvum</i>	48%	96%	1.00E-52	WP_013654593.1
	<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Pannonibacter phragmitetus</i>	49%	96%	2.00E-60	WP_050474407.1
		<i>Labrenzia alexandrii</i>	47%	96%	2.00E-56	WP_008194671.1
		<i>Pseudomonas bauzanensis</i>	45%	96%	2.00E-51	EZQ16437.1
	<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Labrenzia</i> sp. OB1	51%	93%	2.00E-71	KZM48079.1
		<i>Pannonibacter phragmitetus</i>	46%	94%	3.00E-66	WP_019963526.1
		<i>Polymorphum gilvum</i>	44%	94%	1.00E-54	WP_013654593.1
	<i>Methylobacterium extorquens</i> DM4 ^T	<i>Labrenzia alexandrii</i>	49%	97%	2.00E-81	WP_008194671.1
		<i>Pannonibacter phragmitetus</i>	47%	97%	5.00E-76	WP_019963526.1
		<i>Polymorphum gilvum</i>	48%	96%	1.00E-66	WP_013654593.1
	<i>Microvirga massiliensis</i> JC119 ^T	<i>Labrenzia marina</i>	51%	98%	1.00E-71	WP_103223518.1
		<i>Pannonibacter indicus</i>	46%	97%	4.00E-64	WP_055457255.1
		<i>Polymorphum gilvum</i>	47%	97%	3.00E-62	WP_013654593.1
	<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Pannonibacter phragmitetus</i>	51%	97%	9.00E-73	WP_019963526.1
		<i>Labrenzia</i> sp. OB1	51%	96%	3.00E-72	KZM48079.1
		<i>Polymorphum gilvum</i>	52%	97%	1.00E-69	WP_013654593.1
	<i>Methyloferula stellata</i> AR4 ^T	<i>Labrenzia aggregata</i>	53%	97%	1.00E-76	WP_006934609.1
		<i>Pannonibacter phragmitetus</i>	48%	99%	3.00E-72	WP_050474407.1
		<i>Pseudomonas bauzanensis</i>	49%	96%	2.00E-61	EZQ16437.1
	<i>Methylocella sylvestris</i> BL2 ^T	<i>Labrenzia</i> sp. OB1	46%	98%	1.00E-54	KZM48079.1

<i>Rhizobium etli</i> CFN42 ^T	<i>Pseudomonas bauzanensis</i>	46%	96%	5.00E-51	EZQ16437.1
	<i>Pannonibacter phragmitetus</i>	42%	98%	6.00E-51	WP_050474407.1
	<i>Pseudomonas bauzanensis</i>	41%	97%	2.00E-60	EZQ16437.1
	<i>Ahrensia kielensis</i>	40%	98%	2.00E-55	WP_018690483.1
	<i>Pannonibacter phragmitetus</i>	37%	94%	2.00E-47	WP_050474407.1
<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Pannonibacter phragmitetus</i>	69%	91%	0	WP_019963527.1
	<i>Labrenzia</i> sp. VG12	67%	99%	0	WP_094070878.1
	<i>Polymorphum gilvum</i>	68%	91%	0	WP_013654594.1
<i>Rhodopseudomonas palustris</i> BisA53	<i>Labrenzia aggregata</i>	68%	98%	0	WP_040439904.1
	<i>Stappia aggregata</i> IAM 12614	68%	98%	0	EAV44093.1
	<i>Pannonibacter phragmitetus</i>	68%	98%	0	WP_019963527.1
<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Labrenzia aggregata</i>	72%	99%	0	WP_040439904.1
	<i>Stappia aggregata</i> IAM 12614	72%	99%	0	EAV44093.1
	<i>Pannonibacter phragmitetus</i>	72%	98%	0	WP_019963527.1
<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Pannonibacter phragmitetus</i>	73%	99%	0	WP_019963527.1
	<i>Labrenzia marina</i>	73%	99%	0	WP_103223519.1
	<i>Polymorphum gilvum</i>	74%	99%	0	WP_013654594.1
<i>Methylobacterium extorquens</i> DM4 ^T	<i>Pannonibacter phragmitetus</i>	73%	98%	0	WP_019963527.1
	<i>Polymorphum gilvum</i>	72%	98%	0	WP_013654594.1
	<i>Labrenzia alexandrii</i>	71%	98%	0	WP_008192641.1
<i>Microvirga massiliensis</i> JC119 ^T	<i>Labrenzia</i> sp. VG12	73%	98%	0	WP_094070878.1
	<i>Polymorphum gilvum</i>	72%	98%	0	WP_013654594.1
	<i>Pannonibacter phragmitetus</i>	72%	98%	0	WP_019963527.1
<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Polymorphum gilvum</i>	72%	98%	0	WP_013654594.1
	<i>Labrenzia</i> sp. VG12	70%	99%	0	WP_094070878.1
	<i>Pannonibacter phragmitetus</i>	71%	98%	0	WP_019963527.1
<i>Methyloferula stellata</i> AR4 ^T	<i>Pannonibacter phragmitetus</i>	72%	99%	0	WP_050474406.1
	<i>Labrenzia alexandrii</i>	70%	99%	0	WP_008192641.1
	<i>Polymorphum gilvum</i>	72%	99%	0	WP_013654594.1

<i>Methylocella sylvestris</i> BL2 ^T	<i>Pannonibacter phragmitetus</i>	71%	99%	0	WP_050474406.1
	<i>Labrenzia</i> sp. VG12	69%	99%	0	WP_094070878.1
	<i>Stappia aggregata</i> IAM 12614	70%	99%	0	EAV44093.1
	<i>Pseudomonas bauzanensis</i>	73%	93%	0	EZQ16438.1
<i>Rhizobium etli</i> CFN42 ^T	<i>Polymorphum gilvum</i>	69%	93%	0	WP_013654594.1
	<i>Labrenzia marina</i>	67%	93%	0	WP_103223519.1
<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Pseudovibrio stylochi</i>	67%	98%	3.00E-27	WP_068082022.1
	<i>Nesiotobacter exalbescens</i>	64%	98%	3.00E-25	WP_028482867.1
	<i>Polymorphum gilvum</i>	64%	98%	2.00E-23	WP_013654598.1
	<i>Pseudovibrio stylochi</i>	69%	98%	3.00E-39	WP_068082022.1
<i>Rhodopseudomonas palustris</i> BisA53	<i>Nesiotobacter exalbescens</i>	69%	98%	3.00E-37	WP_028482867.1
	<i>Labrenzia</i> sp. VG12	65%	98%	2.00E-34	WP_094070879.1
	<i>Polymorphum gilvum</i>	78%	98%	1.00E-40	WP_013654598.1
<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Labrenzia aggregata</i>	76%	98%	5.00E-40	WP_006934616.1
	<i>Pannonibacter phragmitetus</i>	76%	98%	2.00E-39	WP_050474405.1
	<i>Pseudovibrio stylochi</i>	67%	98%	2.00E-35	WP_068082022.1
<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Labrenzia</i>	61%	98%	3.00E-33	WP_022998516.1
	<i>Nesiotobacter exalbescens</i>	64%	98%	3.00E-33	WP_028482867.1
	<i>Pseudovibrio stylochi</i>	67%	98%	2.00E-36	WP_068082022.1
<i>Methylobacterium extorquens</i> DM4 ^T	<i>Polymorphum gilvum</i>	66%	98%	2.00E-35	WP_013654598.1
	<i>Nesiotobacter exalbescens</i>	66%	98%	3.00E-35	WP_028482867.1
	<i>Nesiotobacter exalbescens</i>	68%	98%	3.00E-37	WP_028482867.1
<i>Microvirga massiliensis</i> JC119 ^T	<i>Pseudovibrio axinellae</i>	68%	98%	2.00E-36	WP_068007089.1
	<i>Polymorphum gilvum</i>	67%	98%	1.00E-34	WP_013654598.1
	<i>Nesiotobacter exalbescens</i>	74%	98%	2.00E-29	WP_028482867.1
<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Pseudovibrio hongkongensis</i>	68%	98%	4.00E-29	WP_068316686.1
	<i>Polymorphum gilvum</i>	64%	98%	1.00E-25	WP_013654598.1
	<i>Nesiotobacter exalbescens</i>	67%	98%	3.00E-38	WP_028482867.1
<i>Methyloferula stellata</i> AR4 ^T	<i>Pseudovibrio axinellae</i>	63%	98%	4.00E-36	WP_068007089.1

fliF	<i>Methylocella sylvestris</i> BL2 ^T	<i>Labrenzia aggregata</i>	61%	98%	1.00E-34	WP_006934616.1
		<i>Pseudovibrio axinellae</i>	74%	98%	1.00E-27	WP_068007089.1
		<i>Polymorphum gilvum</i>	68%	98%	7.00E-24	WP_013654598.1
		<i>Pannonibacter phragmitetus</i>	65%	98%	2.00E-22	WP_050474405.1
	<i>Rhizobium etli</i> CFN42 ^T	<i>Nesiotobacter exalbescens</i>	64%	98%	6.00E-34	WP_028482867.1
		<i>Labrenzia</i> sp. VG12	63%	98%	4.00E-33	WP_094070879.1
		<i>Polymorphum gilvum</i>	64%	98%	5.00E-33	WP_013654598.1
	<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Polymorphum gilvum</i>	55%	94%	0	WP_013654610.1
		<i>Pannonibacter phragmitetus</i>	53%	94%	0	WP_019963540.1
		<i>Labrenzia aggregata</i>	53%	94%	0	WP_055654459.1
		<i>Polymorphum gilvum</i>	54%	99%	4.00E-166	WP_013654610.1
	<i>Rhodopseudomonas palustris</i> BisA53	<i>Pannonibacter phragmitetus</i>	53%	99%	8.00E-164	WP_058898120.1
		<i>Labrenzia aggregata</i>	52%	99%	6.00E-163	WP_055654459.1
		<i>Labrenzia</i> sp. VG12	57%	99%	0	WP_094070890.1
	<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Polymorphum gilvum</i>	56%	99%	3.00E-179	WP_013654610.1
		<i>Pannonibacter phragmitetus</i>	56%	99%	6.00E-177	WP_058898120.1
		<i>Pannonibacter phragmitetus</i>	61%	99%	0	WP_058898120.1
	<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Polymorphum gilvum</i>	60%	99%	0	WP_013654610.1
		<i>Labrenzia</i> sp. VG12	59%	99%	0	WP_094070890.1
		<i>Polymorphum gilvum</i>	55%	99%	2.00E-179	WP_013654610.1
	<i>Methylobacterium extorquens</i> DM4 ^T	<i>Labrenzia aggregata</i>	54%	99%	8.00E-178	WP_055654459.1
		<i>Pannonibacter phragmitetus</i>	52%	99%	2.00E-166	WP_019963540.1
		<i>Polymorphum gilvum</i>	57%	99%	0	WP_013654610.1
	<i>Microvirga massiliensis</i> JC119 ^T	<i>Pannonibacter phragmitetus</i>	56%	99%	0	WP_019963540.1
		<i>Labrenzia aggregata</i>	56%	99%	0	WP_055654459.1
		<i>Labrenzia aggregata</i>	55%	99%	0	WP_055654459.1
	<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Pannonibacter phragmitetus</i>	56%	99%	0	WP_019963540.1
		<i>Polymorphum gilvum</i>	56%	99%	0	WP_013654610.1
	<i>Methyloferula stellata</i> AR4 ^T	<i>Labrenzia aggregata</i>	55%	99%	0	WP_055654459.1

	<i>Methylocella sylvestris</i> BL2 ^T	<i>Polymorphum gilvum</i>	57%	99%	2.00E-180	WP_013654610.1
		<i>Pannonibacter phragmitetus</i>	54%	99%	2.00E-167	WP_019963540.1
		<i>Labrenzia alexandrii</i>	56%	99%	0	WP_055673358.1
		<i>Polymorphum gilvum</i>	57%	99%	0	WP_013654610.1
		<i>Pannonibacter phragmitetus</i>	54%	99%	3.00E-176	WP_019963540.1
		<i>Pseudomonas bauzanensis</i>	48%	97%	6.00E-159	EZQ16450.1
	<i>Rhizobium etli</i> CFN42 ^T	<i>Nesiotobacter exalbescens</i>	48%	80%	2.00E-130	WP_028482879.1
		<i>Pseudovibrio stylochi</i>	43%	97%	2.00E-125	WP_068082061.1
		<i>Labrenzia aggregata</i>	74%	91%	3.00E-111	WP_006934633.1
	<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Polymorphum gilvum</i>	73%	90%	1.00E-107	WP_013654612.1
		<i>Nesiotobacter exalbescens</i>	72%	91%	3.00E-107	OKL43095.1
		<i>Labrenzia aggregata</i>	72%	98%	3.00E-115	WP_006934633.1
	<i>Rhodopseudomonas palustris</i> BisA53	<i>Polymorphum gilvum</i>	75%	91%	5.00E-112	WP_013654612.1
		<i>Nesiotobacter exalbescens</i>	72%	93%	2.00E-110	OKL43095.1
		<i>Pannonibacter phragmitetus</i>	78%	94%	1.00E-120	WP_058898122.1
	<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Labrenzia marina</i>	77%	93%	8.00E-119	WP_103223635.1
		<i>Polymorphum gilvum</i>	78%	93%	4.00E-118	WP_013654612.1
		<i>Labrenzia marina</i>	74%	91%	1.00E-120	POF30148.1
fliP	<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Pannonibacter phragmitetus</i>	74%	90%	1.00E-118	WP_058898122.1
		<i>Polymorphum gilvum</i>	72%	91%	9.00E-117	WP_013654612.1
		<i>Labrenzia aggregata</i>	74%	84%	7.00E-112	WP_006934633.1
	<i>Methylobacterium extorquens</i> DM4 ^T	<i>Pannonibacter phragmitetus</i>	74%	84%	2.00E-111	WP_094463440.1
		<i>Polymorphum gilvum</i>	74%	84%	2.00E-110	WP_013654612.1
		<i>Labrenzia aggregata</i>	72%	90%	7.00E-107	WP_006934633.1
	<i>Microvirga massiliensis</i> JC119 ^T	<i>Polymorphum gilvum</i>	71%	91%	2.00E-103	WP_013654612.1
		<i>Stappia</i> sp. 22II-S9-Z10	71%	90%	5.00E-103	ORE95796.1
		<i>Labrenzia aggregata</i>	72%	95%	1.00E-106	WP_006934633.1
	<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Pannonibacter phragmitetus</i>	71%	94%	9.00E-103	WP_019963542.1
		<i>Polymorphum gilvum</i>	73%	84%	2.00E-102	WP_013654612.1

		<i>Labrenzia aggregata</i>	71%	95%	1.00E-105	WP_006934633.1
	<i>Methyloferula stellata</i> AR4 ^T	<i>Polymorphum gilvum</i>	74%	91%	4.00E-102	WP_013654612.1
		<i>Pannonibacter phragmitetus</i>	69%	93%	8.00E-99	WP_058898122.1
		<i>Labrenzia</i> sp. VG12	71%	91%	3.00E-96	WP_094074561.1
	<i>Methylocella sylvestris</i> BL2 ^T	<i>Polymorphum gilvum</i>	73%	83%	3.00E-94	WP_013654612.1
		<i>Pannonibacter phragmitetus</i>	73%	83%	4.00E-94	WP_094463440.1
		<i>Pseudomonas bauzanensis</i>	72%	92%	7.00E-112	EZQ16453.1
	<i>Rhizobium etli</i> CFN42 ^T	<i>Ahrensia marina</i>	68%	97%	7.00E-110	WP_053999577.1
		<i>Labrenzia marina</i>	65%	99%	2.00E-101	POF30148.1
		<i>Pannonibacter phragmitetus</i>	49%	93%	2.00E-64	WP_026355489.1
	<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Pseudovibrio</i> sp. Ab134	52%	88%	5.00E-64	WP_075698969.1
		<i>Labrenzia alexandrii</i>	50%	93%	3.00E-62	WP_008192303.1
		<i>Labrenzia marina</i>	55%	89%	3.00E-64	WP_103223535.1
	<i>Rhodopseudomonas palustris</i> BisA53	<i>Nesiotobacter exalbescens</i>	50%	89%	3.00E-63	WP_036490176.1
		<i>Pannonibacter phragmitetus</i>	53%	89%	3.00E-62	WP_026355489.1
		<i>Nesiotobacter exalbescens</i>	50%	93%	4.00E-63	WP_036490176.1
	<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Pannonibacter phragmitetus</i>	52%	93%	1.00E-58	WP_050474389.1
		<i>Labrenzia marina</i>	53%	93%	4.00E-58	WP_103223535.1
flgH		<i>Pannonibacter phragmitetus</i>	55%	97%	3.00E-77	WP_050474389.1
	<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Nesiotobacter exalbescens</i>	55%	93%	2.00E-75	WP_036490176.1
		<i>Labrenzia</i> sp. VG12	54%	97%	2.00E-74	WP_094070893.1
		<i>Pseudovibrio stylochi</i>	52%	93%	1.00E-61	WP_068082075.1
	<i>Methylobacterium extorquens</i> DM4 ^T	<i>Nesiotobacter exalbescens</i>	52%	92%	1.00E-60	WP_036490176.1
		<i>Pannonibacter phragmitetus</i>	52%	92%	1.00E-57	WP_026355489.1
		<i>Pseudomonas bauzanensis</i>	52%	99%	2.00E-73	EZQ16455.1
	<i>Microvirga massiliensis</i> JC119 ^T	<i>Labrenzia marina</i>	57%	88%	2.00E-70	WP_103223535.1
		<i>Nesiotobacter exalbescens</i>	53%	90%	6.00E-69	WP_036490176.1
		<i>Polymorphum gilvum</i>	55%	99%	5.00E-71	WP_013654614.1
	<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Nesiotobacter exalbescens</i>	53%	95%	1.00E-70	WP_036490176.1

<i>Methyloferula stellata</i> AR4 ^T	<i>Labrenzia marina</i>	53%	99%	1.00E-67	WP_103223535.1
	<i>Pannonibacter phragmitetus</i>	50%	99%	3.00E-73	WP_026355489.1
	<i>Labrenzia aggregata</i>	53%	99%	1.00E-72	WP_040439910.1
	<i>Stappia aggregata</i> IAM 12614	54%	96%	3.00E-71	EAV44111.1
<i>Methylocella sylvestris</i> BL2 ^T	<i>Polymorphum gilvum</i>	56%	93%	1.00E-76	WP_013654614.1
	<i>Pannonibacter phragmitetus</i>	53%	97%	1.00E-75	WP_050474389.1
	<i>Labrenzia marina</i>	51%	99%	7.00E-75	WP_103223535.1
<i>Rhizobium etli</i> CFN42 ^T	<i>Pseudomonas bauzanensis</i>	50%	92%	2.00E-66	EZQ16455.1
	<i>Pseudovibrio hongkongensis</i>	47%	89%	4.00E-62	WP_068317312.1
	<i>Polymorphum gilvum</i>	50%	89%	5.00E-60	WP_013654614.1
<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Polymorphum gilvum</i>	64%	94%	7.00E-152	WP_013654616.1
	<i>Pannonibacter indicus</i>	65%	94%	8.00E-152	WP_055454342.1
	<i>Labrenzia marina</i>	62%	94%	2.00E-149	WP_103223537.1
<i>Rhodopseudomonas palustris</i> BisA53	<i>Polymorphum gilvum</i>	70%	93%	1.00E-139	WP_013654616.1
	<i>Labrenzia alexandrii</i>	68%	99%	3.00E-136	CTQ75041.1
	<i>Pannonibacter indicus</i>	71%	93%	4.00E-134	WP_055454342.1
<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Labrenzia aggregata</i>	68%	89%	1.00E-157	WP_006934650.1
	<i>Pannonibacter indicus</i>	69%	89%	2.00E-154	WP_055454342.1
	<i>Polymorphum gilvum</i>	67%	89%	5.00E-152	WP_013654616.1
	<i>Polymorphum gilvum</i>	68%	93%	2.00E-144	WP_013654616.1
<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Labrenzia aggregata</i>	66%	94%	2.00E-143	WP_006934650.1
	<i>Pannonibacter phragmitetus</i>	69%	93%	2.00E-142	WP_050474388.1
	<i>Pannonibacter phragmitetus</i>	68%	91%	5.00E-153	WP_050474388.1
<i>Methylobacterium extorquens</i> DM4 ^T	<i>Labrenzia alexandrii</i>	65%	94%	3.00E-151	CTQ75041.1
	<i>Polymorphum gilvum</i>	66%	93%	2.00E-150	WP_013654616.1
	<i>Labrenzia alexandrii</i>	63%	99%	6.00E-152	CTQ75041.1
<i>Microvirga massiliensis</i> JC119 ^T	<i>Stappia</i> sp. 22II-S9-Z10	65%	95%	1.00E-146	WP_083548138.1
	<i>Polymorphum gilvum</i>	67%	93%	2.00E-146	WP_013654616.1
<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Pannonibacter phragmitetus</i>	66%	97%	9.00E-148	WP_019963546.1

flgG	<i>Methyloferula stellata</i> AR4 ^T	<i>Labrenzia alexandrii</i> DFL-11	66%	97%	6.00E-146	EEE44706.1
		<i>Polymorphum gilvum</i>	66%	93%	1.00E-147	WP_013654616.1
		<i>Labrenzia alexandrii</i>	64%	99%	8.00E-148	WP_040451985.1
		<i>Polymorphum gilvum</i>	67%	95%	1.00E-143	WP_013654616.1
		<i>Pannonibacter phragmitetus</i>	64%	99%	2.00E-143	WP_019963546.1
	<i>Methylocella sylvestris</i> BL2 ^T	<i>Labrenzia alexandrii</i> DFL-11	62%	98%	1.00E-130	EEE44706.1
		<i>Polymorphum gilvum</i>	64%	94%	6.00E-126	WP_013654616.1
		<i>Pannonibacter phragmitetus</i>	64%	93%	7.00E-126	WP_050474388.1
		<i>Pseudomonas bauzanensis</i>	64%	93%	1.00E-151	EZQ16457.1
	<i>Rhizobium etli</i> CFN42 ^T	<i>Acuticoccus yangtzensis</i>	57%	93%	1.00E-129	WP_075221725.1
		<i>Stappia</i> sp. 22II-S9-Z10	57%	93%	2.00E-129	WP_083548138.1
		<i>Labrenzia alexandrii</i>	66%	99%	9.00E-122	WP_055673361.1
	<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Polymorphum gilvum</i>	68%	99%	6.00E-116	WP_013654618.1
		<i>Pannonibacter phragmitetus</i>	67%	99%	9.00E-116	WP_050474386.1
		<i>Labrenzia</i> sp. OB1	71%	99%	2.00E-130	WP_068417949.1
	<i>Rhodopseudomonas palustris</i> BisA53	<i>Pannonibacter phragmitetus</i>	68%	99%	1.00E-122	WP_050474386.1
		<i>Polymorphum gilvum</i>	68%	99%	4.00E-122	WP_013654618.1
		<i>Labrenzia</i> sp. OB1	71%	99%	2.00E-129	WP_068417949.1
	<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Pannonibacter phragmitetus</i>	72%	99%	2.00E-127	WP_050474386.1
		<i>Polymorphum gilvum</i>	71%	99%	6.00E-125	WP_013654618.1
		<i>Labrenzia aggregata</i>	71%	99%	6.00E-135	WP_006934654.1
	<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Pannonibacter phragmitetus</i>	73%	99%	1.00E-132	WP_019963548.1
		<i>Polymorphum gilvum</i>	74%	99%	4.00E-132	WP_013654618.1
	<i>Methylobacterium extorquens</i> DM4 ^T	<i>Labrenzia</i> sp. VG12	70%	99%	2.00E-133	WP_094070897.1
		<i>Pannonibacter phragmitetus</i>	68%	99%	2.00E-127	WP_050474386.1
		<i>Polymorphum gilvum</i>	69%	99%	2.00E-127	WP_013654618.1
		<i>Labrenzia alexandrii</i>	68%	99%	2.00E-118	WP_055673361.1
	<i>Microvirga massiliensis</i> JC119 ^T	<i>Polymorphum gilvum</i>	69%	99%	2.00E-116	WP_013654618.1
		<i>Pannonibacter phragmitetus</i>	67%	99%	2.00E-111	WP_050474386.1

<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Labrenzia</i> sp. VG12	68%	99%	4.00E-131	WP_094070897.1
	<i>Pannonibacter phragmitetus</i>	69%	99%	1.00E-130	WP_050474386.1
	<i>Polymorphum gilvum</i>	70%	99%	3.00E-130	WP_013654618.1
<i>Methyloferula stellata</i> AR4 ^T	<i>Labrenzia marina</i>	68%	98%	8.00E-114	WP_103223539.1
	<i>Polymorphum gilvum</i>	66%	98%	2.00E-108	WP_013654618.1
	<i>Pannonibacter phragmitetus</i>	66%	98%	7.00E-108	WP_050474386.1
<i>Methylocella sylvestris</i> BL2 ^T	<i>Labrenzia marina</i>	65%	99%	2.00E-115	WP_103223539.1
	<i>Pannonibacter phragmitetus</i>	65%	99%	9.00E-112	WP_050474386.1
	<i>Polymorphum gilvum</i>	64%	99%	4.00E-111	WP_013654618.1
<i>Rhizobium etli</i> CFN42 ^T	<i>Pseudomonas bauzanensis</i>	68%	99%	2.00E-120	EZQ16459.1
	<i>Ahrensia marina</i>	67%	99%	5.00E-113	WP_053999582.1
	<i>Labrenzia alexandrii</i>	62%	99%	2.00E-107	WP_055673361.1
<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Labrenzia aggregata</i>	58%	66%	7.00E-20	WP_006934656.1
	<i>Polymorphum gilvum</i>	57%	62%	6.00E-17	WP_013654619.1
	<i>Pannonibacter phragmitetus</i>	57%	65%	7.00E-17	KND17501.1
<i>Rhodopseudomonas palustris</i> BisA53	<i>Labrenzia aggregata</i>	48%	99%	1.00E-23	WP_077292789.1
	<i>Polymorphum gilvum</i>	52%	99%	2.00E-23	WP_013654619.1
	<i>Pannonibacter phragmitetus</i>	46%	99%	1.00E-19	ALV26355.1
<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Labrenzia aggregata</i>	66%	57%	3.00E-20	WP_006934656.1
	<i>Polymorphum gilvum</i>	68%	57%	1.00E-19	WP_013654619.1
	<i>Pannonibacter phragmitetus</i>	66%	57%	6.00E-19	KND17501.1
<i>fliE</i>	<i>Polymorphum gilvum</i>	50%	99%	2.00E-24	WP_013654619.1
<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Labrenzia alexandrii</i>	47%	95%	4.00E-23	WP_008190823.1
	<i>Pannonibacter phragmitetus</i>	47%	99%	6.00E-22	ALV26355.1
	<i>Labrenzia aggregata</i>	54%	67%	2.00E-21	WP_077292789.1
<i>Methylobacterium extorquens</i> DM4 ^T	<i>Polymorphum gilvum</i>	45%	99%	2.00E-20	WP_013654619.1
	<i>Nesiotobacter exalbescens</i>	46%	98%	5.00E-20	WP_028482887.1
<i>Microvirga massiliensis</i> JC119 ^T	<i>Labrenzia aggregata</i>	74%	60%	3.00E-26	WP_006934656.1
	<i>Polymorphum gilvum</i>	70%	60%	7.00E-24	WP_013654619.1

flgC		<i>Pannonibacter phragmitetus</i>	71%	60%	9.00E-24	KND17501.1
		<i>Labrenzia</i> sp. VG12	45%	99%	3.00E-06	WP_094070898.1
	<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Pannonibacter phragmitetus</i>	55%	64%	3.00E-04	KND17501.1
		<i>Polymorphum gilvum</i>	47%	99%	0.003	WP_013654619.1
		<i>Labrenzia</i> sp. OB1	59%	64%	1.00E-20	WP_068417941.1
	<i>Methyloferula stellata</i> AR4 ^T	<i>Polymorphum gilvum</i>	61%	64%	2.00E-19	WP_013654619.1
		<i>Pannonibacter phragmitetus</i>	51%	72%	6.00E-18	KND17501.1
		<i>Labrenzia aggregata</i>	62%	69%	5.00E-23	WP_077292789.1
	<i>Methylocella sylvestris</i> BL2 ^T	<i>Polymorphum gilvum</i>	62%	70%	8.00E-20	WP_013654619.1
		<i>Pannonibacter phragmitetus</i>	58%	68%	3.00E-19	KND17501.1
		<i>Pseudomonas bauzanensis</i>	53%	59%	1.00E-15	EZQ16460.1
	<i>Rhizobium etli</i> CFN42 ^T	<i>Ahrensia marina</i>	46%	60%	4.00E-15	WP_053999583.1
		<i>Labrenzia aggregata</i>	47%	61%	8.00E-15	WP_077292789.1
		<i>Pannonibacter phragmitetus</i>	66%	98%	5.00E-64	WP_050474385.1
	<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Polymorphum gilvum</i>	64%	98%	1.00E-63	WP_013654620.1
		<i>Labrenzia</i> sp. OB1	64%	99%	3.00E-60	WP_068417937.1
		<i>Pannonibacter phragmitetus</i>	66%	98%	4.00E-58	WP_019963550.1
	<i>Rhodopseudomonas palustris</i> BisA53	<i>Polymorphum gilvum</i>	67%	98%	2.00E-57	WP_013654620.1
		<i>Labrenzia</i> sp. OB1	67%	98%	4.00E-56	WP_068417937.1
		<i>Pannonibacter indicus</i>	64%	98%	4.00E-61	WP_055454345.1
	<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Labrenzia</i> sp. OB1	64%	97%	6.00E-58	WP_068417937.1
		<i>Polymorphum gilvum</i>	61%	98%	1.00E-57	WP_013654620.1
		<i>Pannonibacter phragmitetus</i>	74%	98%	2.00E-72	WP_019963550.1
	<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Polymorphum gilvum</i>	69%	98%	2.00E-69	WP_013654620.1
		<i>Labrenzia</i> sp. VG12	71%	99%	3.00E-67	WP_094070899.1
		<i>Polymorphum gilvum</i>	64%	98%	2.00E-52	WP_013654620.1
	<i>Methylobacterium extorquens</i> DM4 ^T	<i>Pannonibacter indicus</i>	63%	98%	4.00E-51	WP_055454345.1
		<i>Stappia</i> sp. 22II-S9-Z10	67%	97%	2.00E-50	WP_083548139.1
	<i>Microvirga massiliensis</i> JC119 ^T	<i>Pannonibacter phragmitetus</i>	74%	98%	2.00E-69	WP_019963550.1

	<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Polymorphum gilvum</i>	70%	98%	3.00E-68	WP_013654620.1
		<i>Pseudovibrio axinellae</i>	69%	98%	2.00E-63	WP_068010184.1
		<i>Pannonibacter indicus</i>	69%	98%	3.00E-67	WP_055454345.1
		<i>Nesiotobacter exalbescens</i>	67%	98%	2.00E-64	WP_028482888.1
		<i>Polymorphum gilvum</i>	66%	98%	4.00E-64	WP_013654620.1
		<i>Pannonibacter indicus</i>	63%	97%	4.00E-59	WP_055454345.1
	<i>Methyloferula stellata</i> AR4 ^T	<i>Pseudovibrio stylochi</i>	61%	98%	1.00E-58	WP_068082084.1
		<i>Polymorphum gilvum</i>	60%	97%	5.00E-57	WP_013654620.1
		<i>Pannonibacter indicus</i>	71%	97%	2.00E-67	WP_055454345.1
	<i>Methylocella sylvestris</i> BL2 ^T	<i>Polymorphum gilvum</i>	67%	97%	8.00E-65	WP_013654620.1
		<i>Pseudovibrio stylochi</i>	65%	97%	1.00E-63	WP_068082084.1
		<i>Pseudovibrio stylochi</i>	62%	99%	4.00E-59	WP_068082084.1
<i>flgB</i>	<i>Rhizobium etli</i> CFN42 ^T	<i>Inquilinus limosus</i>	60%	97%	8.00E-57	WP_026869949.1
		<i>Pannonibacter indicus</i>	62%	97%	1.00E-56	WP_055454345.1
		<i>Pannonibacter phragmitetus</i>	48%	91%	2.00E-37	WP_050474384.1
	<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Labrenzia</i> sp. VG12	47%	92%	1.00E-35	WP_094070900.1
		<i>Polymorphum gilvum</i>	47%	91%	2.00E-35	WP_013654621.1
		<i>Pannonibacter phragmitetus</i>	54%	91%	3.00E-41	WP_050474384.1
	<i>Rhodopseudomonas palustris</i> BisA53	<i>Labrenzia aggregata</i>	48%	92%	2.00E-38	WP_006934660.1
		<i>Polymorphum gilvum</i>	48%	91%	1.00E-37	WP_013654621.1
		<i>Pseudovibrio hongkongensis</i>	60%	99%	1.00E-44	WP_068316793.1
	<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Pannonibacter phragmitetus</i>	52%	99%	1.00E-40	WP_050474384.1
		<i>Polymorphum gilvum</i>	50%	99%	2.00E-40	WP_013654621.1
		<i>Labrenzia aggregata</i>	57%	98%	4.00E-46	WP_006934660.1
	<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Pannonibacter indicus</i>	56%	98%	7.00E-45	WP_055454346.1
		<i>Polymorphum gilvum</i>	54%	98%	2.00E-43	WP_013654621.1
		<i>Polymorphum gilvum</i>	53%	94%	8.00E-39	WP_013654621.1
	<i>Methylobacterium extorquens</i> DM4 ^T	<i>Pannonibacter phragmitetus</i>	50%	94%	2.00E-36	WP_050474384.1
		<i>Labrenzia</i> sp. VG12	48%	94%	4.00E-35	WP_094070900.1

<i>Microvirga massiliensis</i> JC119 ^T	<i>Pannonibacter phragmitetus</i>	62%	95%	1.00E-49	WP_050474384.1
	<i>Polymorphum gilvum</i>	59%	95%	1.00E-48	WP_013654621.1
	<i>Pseudovibrio</i> sp. Tun.PSC04-5.I4	60%	94%	8.00E-46	WP_093179797.1
	<i>Pannonibacter indicus</i>	50%	98%	2.00E-31	WP_055454346.1
<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Polymorphum gilvum</i>	46%	98%	2.00E-29	WP_013654621.1
	<i>Labrenzia alexandrii</i>	46%	98%	3.00E-29	WP_040451983.1
	<i>Pannonibacter phragmitetus</i>	50%	94%	8.00E-39	WP_050474384.1
<i>Methyloferula stellata</i> AR4 ^T	<i>Polymorphum gilvum</i>	52%	94%	9.00E-39	WP_013654621.1
	<i>Nesiotobacter exalbescens</i>	52%	93%	3.00E-37	WP_028482889.1
	<i>Polymorphum gilvum</i>	50%	99%	7.00E-38	WP_013654621.1
<i>Methylocella sylvestris</i> BL2 ^T	<i>Pseudovibrio</i> sp. Tun.PSC04-5.I4	51%	97%	5.00E-36	WP_093179797.1
	<i>Pannonibacter phragmitetus</i>	47%	99%	8.00E-35	WP_050474384.1
	<i>Pseudomonas bauzanensis</i>	41%	95%	2.00E-28	EZQ16462.1
	<i>Polymorphum gilvum</i>	40%	98%	6.00E-28	WP_013654621.1
<i>Rhizobium etli</i> CFN42 ^T	<i>Nesiotobacter exalbescens</i>	42%	99%	7.00E-28	WP_028482889.1
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<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Pannonibacter phragmitetus</i>	55%	98%	2.00E-127	WP_019963519.1
	<i>Labrenzia</i> sp. OB1	56%	97%	8.00E-127	WP_068418034.1
	<i>Polymorphum gilvum</i>	58%	97%	2.00E-119	WP_013654587.1
	<i>Pannonibacter phragmitetus</i>	59%	93%	3.00E-141	WP_019963519.1
<i>Rhodopseudomonas palustris</i> BisA53	<i>Labrenzia</i> sp. OB1	55%	94%	1.00E-132	WP_068418034.1
	<i>Brevundimonas diminuta</i>	56%	93%	4.00E-128	OYX21155.1
	<i>Pannonibacter phragmitetus</i>	58%	96%	4.00E-151	WP_050474412.1
<i>flhB</i> <i>Pleomorphomonas oryzae</i> DSM 16300 ^T	<i>Labrenzia</i> sp. OB1	55%	96%	6.00E-137	WP_068418034.1
	<i>Polymorphum gilvum</i>	57%	95%	6.00E-133	WP_013654587.1
	<i>Pannonibacter phragmitetus</i>	56%	98%	2.00E-134	WP_050474412.1
	<i>Labrenzia</i> sp. OB1	57%	96%	1.00E-133	WP_068418034.1
<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Polymorphum gilvum</i>	57%	96%	2.00E-122	WP_013654587.1
	<i>Brevundimonas diminuta</i>	55%	98%	3.00E-115	OYX21155.1
	<i>Labrenzia alexandrii</i>	53%	98%	1.00E-111	WP_055670191.1

	<i>Nesiotobacter exalbescens</i>	54%	99%	3.00E-109	WP_028482890.1
<i>Microvirga massiliensis</i> JC119 ^T	<i>Brevundimonas diminuta</i>	60%	99%	5.00E-142	OYX21155.1
	<i>Pannonibacter phragmitetus</i>	57%	98%	4.00E-141	WP_050474412.1
	<i>Labrenzia marina</i>	55%	98%	1.00E-133	WP_103223513.1
	<i>Pannonibacter phragmitetus</i>	55%	98%	7.00E-119	WP_019963519.1
<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Labrenzia aggregata</i>	51%	99%	1.00E-116	WP_055654437.1
	<i>Polymorphum gilvum</i>	55%	99%	1.00E-108	WP_013654587.1
	<i>Labrenzia</i> sp. OB1	52%	99%	1.00E-112	WP_068418034.1
	<i>Pannonibacter indicus</i>	55%	99%	8.00E-112	WP_055457260.1
<i>Methyloferula stellata</i> AR4 ^T	<i>Polymorphum gilvum</i>	53%	99%	5.00E-105	WP_013654587.1
	<i>Pannonibacter phragmitetus</i>	51%	91%	7.00E-111	WP_019963519.1
	<i>Labrenzia</i> sp. VG12	54%	91%	6.00E-110	WP_094070869.1
	<i>Brevundimonas diminuta</i>	51%	91%	2.00E-106	OYX21155.1
<i>Methylocella sylvestris</i> BL2 ^T	<i>Pannonibacter indicus</i>	49%	97%	2.00E-88	WP_055457260.1
	<i>Rhizobium etli</i> CFN42 ^T	50%	98%	5.00E-86	EZQ16471.1
	<i>Brevundimonas diminuta</i>	45%	98%	4.00E-82	OYX21155.1
	<i>Pannonibacter phragmitetus</i>	60%	95%	3.00E-125	WP_050474413.1
<i>Bradyrhizobium diazoefficiens</i> USDA 110 ^T	<i>Polymorphum gilvum</i>	59%	95%	6.00E-123	WP_013654586.1
	<i>Labrenzia marina</i>	55%	94%	1.00E-111	WP_103223512.1
	<i>Pannonibacter phragmitetus</i>	60%	95%	1.00E-146	WP_050474413.1
	<i>Rhodopseudomonas palustris</i> BisA53	60%	95%	7.00E-146	WP_013654586.1
<i>fliG</i>	<i>Labrenzia</i> sp. VG12	56%	95%	6.00E-136	WP_094070868.1
	<i>Pannonibacter phragmitetus</i>	60%	99%	6.00E-144	WP_019963518.1
	<i>Pleomorphomonas oryzae</i> DSM 16300 ^T	61%	95%	2.00E-142	WP_013654586.1
	<i>Labrenzia marina</i>	59%	95%	2.00E-136	WP_103223512.1
<i>Cohaesibacter marisflavi</i> CGMCC 1.9157 ^T	<i>Pannonibacter indicus</i>	65%	94%	1.00E-160	WP_055457261.1
	<i>Polymorphum gilvum</i>	63%	97%	1.00E-157	WP_013654586.1
	<i>Labrenzia</i> sp. OB1	62%	96%	3.00E-155	WP_068418037.1
	<i>Methylobacterium extorquens</i> DM4 ^T	61%	91%	4.00E-148	WP_013654586.1

<i>Microvirga massiliensis</i> JC119 ^T	<i>Pannonibacter phragmitetus</i>	58%	92%	2.00E-142	WP_050474413.1
	<i>Labrenzia alexandrii</i>	57%	91%	1.00E-137	WP_050775945.1
	<i>Pannonibacter phragmitetus</i>	57%	97%	4.00E-138	WP_050474413.1
	<i>Polymorphum gilvum</i>	58%	97%	2.00E-136	WP_013654586.1
	<i>Labrenzia</i> sp. VG12	56%	96%	3.00E-134	WP_094070868.1
<i>Bosea vaviloviae</i> Vaf-18 ^T	<i>Polymorphum gilvum</i>	56%	96%	5.00E-124	WP_013654586.1
	<i>Pannonibacter phragmitetus</i>	54%	92%	2.00E-121	WP_050474413.1
	<i>Labrenzia</i> sp. OB1	53%	92%	1.00E-117	WP_068418037.1
<i>Methyloferula stellata</i> AR4 ^T	<i>Pannonibacter indicus</i>	53%	98%	2.00E-118	WP_055457261.1
	<i>Polymorphum gilvum</i>	54%	98%	5.00E-117	WP_013654586.1
	<i>Labrenzia</i> sp. VG12	54%	94%	2.00E-114	WP_094070868.1
<i>Methylocella sylvestris</i> BL2 ^T	<i>Pannonibacter phragmitetus</i>	55%	94%	2.00E-109	WP_050474413.1
	<i>Polymorphum gilvum</i>	55%	95%	1.00E-107	WP_013654586.1
	<i>Labrenzia aggregata</i>	53%	98%	8.00E-107	WP_006934600.1
<i>Rhizobium etli</i> CFN42 ^T	<i>Pseudomonas bauzanensis</i>	42%	92%	1.00E-78	EZQ16470.1
	<i>Pseudovibrio axinellae</i>	32%	92%	9.00E-49	WP_068010189.1
	<i>Ahrensia marina</i>	33%	93%	1.00E-46	WP_082376687.1
