Supplementary material

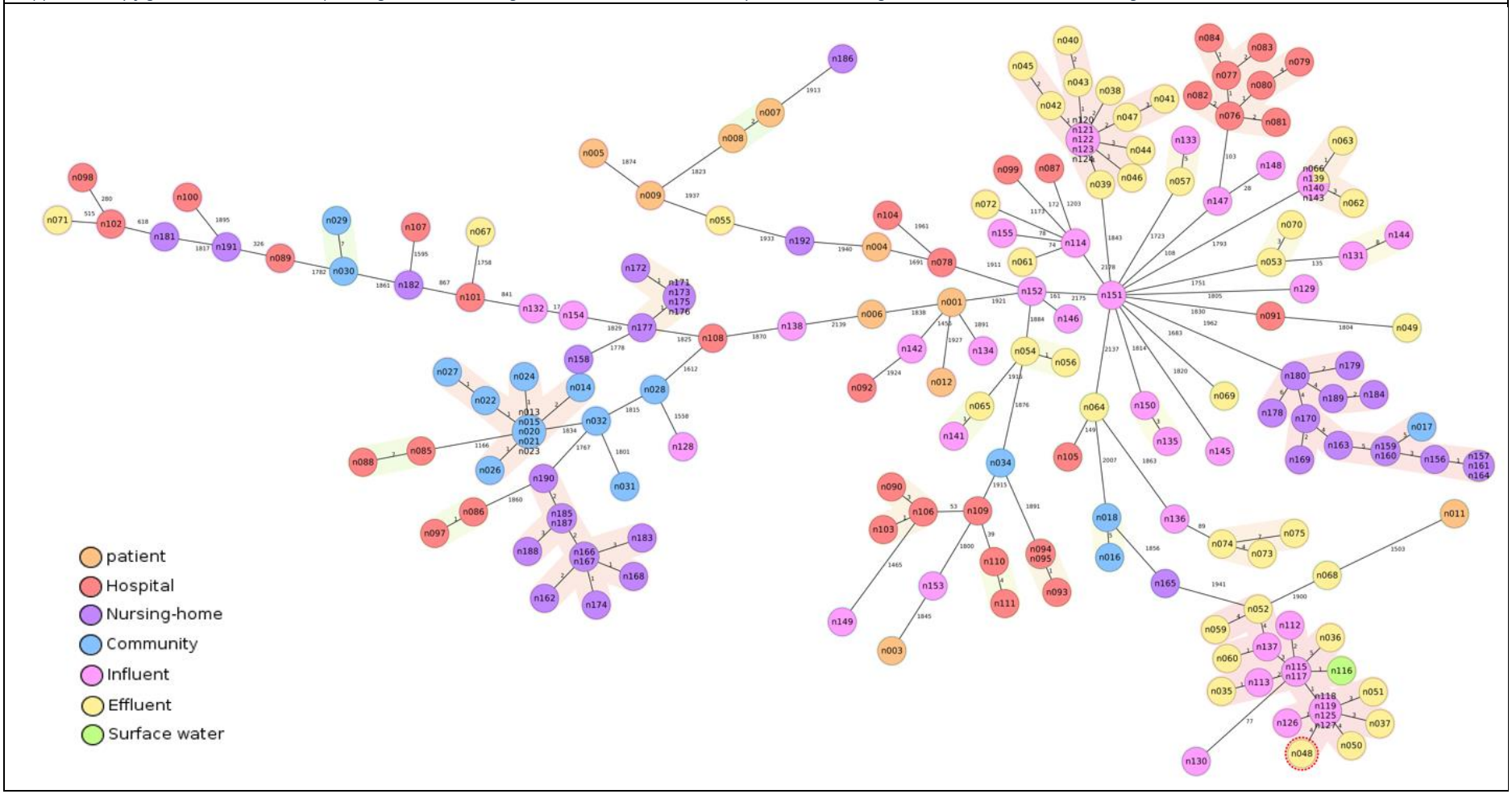
Supplementary Table ST1: The sequenced strains, source, month of isolation, K. pneumoniae subspecies type, sequence type (ST), O-locus, K-locus, and cgMLST cluster. The 11 strains that contained yersiniabactin virulence genes are coloured in red.

Number	Name	Source	Isolation date	Species	cgMLST cluster	ST	K_locus	O_locus
n001	P09.1.kp	patient	2017-09	*K. pneumoniae*	NA	45	KL24	O2v1
n003	P11.1.kp	patient	2017-11	*K. pneumoniae*	NA	391	KL30	O1v2
n004	P06.1.kp	patient	2017-06	*K. pneumoniae*	NA	4240	KL35	O1v1
n005	P07.2.kp	patient	2017-07	*K. pneumoniae*	NA	231	KL51	O1v2
n006	P07.3.kp	patient	2017-07	*K. pneumoniae*	NA	629	KL10	O3/O3a
n007	P01.1.kp	patient	2017-01	*K. pneumoniae*	18	15	KL19	O1v2
n008	P01.2.kp	patient	2017-01	*K. pneumoniae*	18	15	KL19	O1v2
n009	P09.2.kp	patient	2017-09	*K. pneumoniae*	NA	397	KL158	O1v1
n011	P10.1.kqq	patient	2017-10	*K. quasipneumoniae subsp. quasipneumoniae*	NA	2672	KL137	O12
n012	P07.4.kp	patient	2017-07	*K. pneumoniae*	NA	48	KL62	O1v1
n013	C02.1.kvv	community	2017-02-06	*K. variicola subsp. variicola*	5	1255	KL123	O5
n014	C02.2.kvv	community	2017-02-06	*K. variicola subsp. variicola*	5	1255	KL123	O5
n015	C02.3.kvv	community	2017-02-27	*K. variicola subsp. variicola*	5	1255	KL123	O5
n016	C02.4.kqq	community	2017-02-28	*K. quasipneumoniae subsp. quasipneumoniae*	23	?	KL1	O3/O3a
n017	C02.5.kqs	community	2017-02-28	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n018	C02.6.kqq	community	2017-02-28	*K. quasipneumoniae subsp. quasipneumoniae*	23	?	KL1	O3/O3a
n020	C03.1.kvv	community	2017-03-27	*K. variicola subsp. variicola*	5	1255	KL123	O5
n021	C03.2.kvv	community	2017-03-27	*K. variicola subsp. variicola*	5	1255	KL123	O5
n022	C03.3.kvv	community	2017-03-28	*K. variicola subsp. variicola*	5	1255	KL123	O5
n023	C03.4.kvv	community	2017-03-28	*K. variicola subsp. variicola*	5	1255	KL123	O5
n024	C04.1.kvv	community	2017-04-24	*K. variicola subsp. variicola*	5	1255	KL123	O5
n026	C05.2.kvv	community	2017-05-23	*K. variicola subsp. variicola*	5	1255	KL123	O5
n027	C06.1.kvv	community	2017-06-19	*K. variicola subsp. variicola*	5	1255	KL123	O5
n028	C06.2.kvv	community	2017-06-19	*K. variicola subsp. variicola*	NA	318	KL38	O5
n029	C06.3.kvv	community	2017-06-20	*K. variicola subsp. variicola*	14	?	KL10	O5
n030	C07.1.kvv	community	2017-07-18	*K. variicola subsp. variicola*	14	?	KL10	O5
n031	C07.2.kvv	community	2017-07-18	*K. variicola subsp. variicola*	NA	1142	KL105	O5
n032	C10.1.kvv	community	2017-10-09	*K. variicola subsp. variicola*	NA	2388	KL38	O5
n034	C11.1.kp	community	2017-11-06	*K. pneumoniae*	NA	253	KL60	O1v1
n035	E01.1.kqq	effluent	2017-01-16	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n036	E01.2.kqq	effluent	2017-01-16	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n037	E01.3.kqq	effluent	2017-01-16	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n038	E02.2.kqs	effluent	2017-02-06	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n039	E02.3.kqs	effluent	2017-02-06	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n040	E02.4.kqs	effluent	2017-02-06	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n041	E02.5.kqs	effluent	2017-02-06	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n042	E02.6.kqs	effluent	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n043	E02.7.kqs	effluent	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n044	E02.8.kqs	effluent	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n045	E02.9.kqs	effluent	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n046	E02.1.kqs	effluent	2017-02-06	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n047	E02.10.kqs	effluent	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n048	E02.11.kqq	effluent	2017-02-28	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n049	E03.1.kqs	effluent	2017-03-27	*K. quasipneumoniae subsp. similipneumoniae*	NA	414	KL123	O3/O3a
n050	E03.2.kqq	effluent	2017-03-27	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n051	E03.3.kqq	effluent	2017-03-28	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n052	E04.1.kqq	effluent	2017-04-24	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n053	E04.2.kqs	effluent	2017-04-24	*K. quasipneumoniae subsp. similipneumoniae*	20	?	KL56	O12
n054	E04.3.kp	effluent	2017-04-25	*K. pneumoniae*	16	3437	KL19	O4
n055	E05.1.kp	effluent	2017-05-22	*K. pneumoniae*	NA	247	KL10	O3b
n056	E05.2.kp	effluent	2017-05-22	*K. pneumoniae*	16	3437	KL19	O4
n057	E05.3.kqs	effluent	2017-05-22	*K. quasipneumoniae subsp. similipneumoniae*	19	1795	KL101	O3/O3a

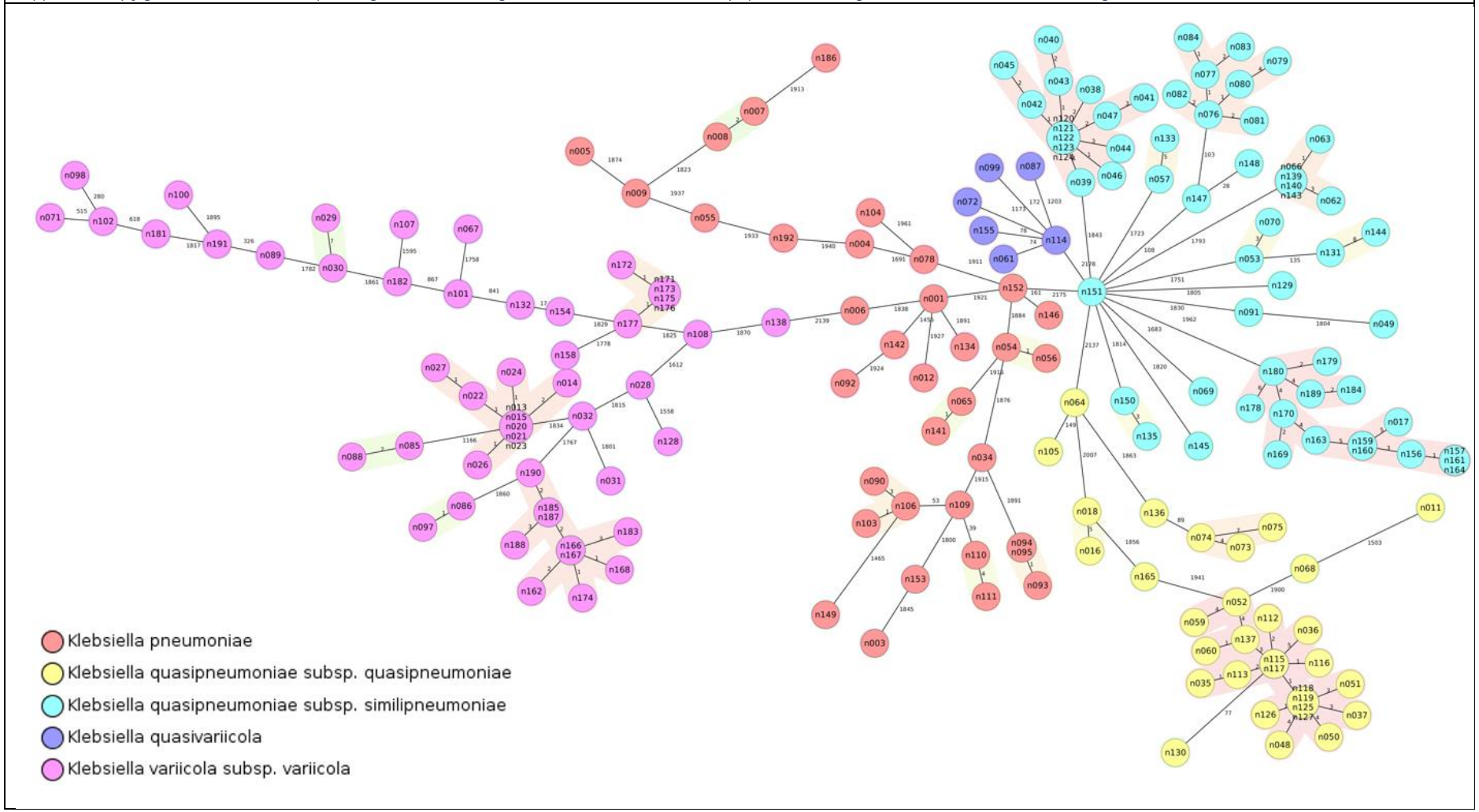
Number	Name	Source	Isolation date	Species	cgMLST cluster	ST	K_locus	O_locus
n059	E06.2.kqq	effluent	2017-06-19	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n060	E06.3.kqq	effluent	2017-06-20	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n061	E07.1.kv	effluent	2017-07-17	*K. quasivariicola*	NA	?	KL51	O2v2
n062	E07.2.kqs	effluent	2017-07-17	*K. quasipneumoniae subsp. similipneumoniae*	7	3595	KL126	O12
n063	E07.3.kqs	effluent	2017-07-18	*K. quasipneumoniae subsp. similipneumoniae*	7	3595	KL126	O12
n064	E08.1.kqq	effluent	2017-08-14	*K. quasipneumoniae subsp. quasipneumoniae*	NA	526	KL33	O12
n065	E08.2.kp	effluent	2017-08-15	*K. pneumoniae*	17	?	KL39	O2v2
n066	E08.3.kqs	effluent	2017-08-15	*K. quasipneumoniae subsp. similipneumoniae*	7	3595	KL126	O12
n067	E09.1.kvv	effluent	2017-09-12	*K. variicola subsp. variicola*	NA	906	KL10	O5
n068	E09.2.kqq	effluent	2017-09-12	*K. quasipneumoniae subsp. quasipneumoniae*	NA	4982	KL134	O3/O3a
n069	E09.3.kqs	effluent	2017-09-12	*K. quasipneumoniae subsp. similipneumoniae*	20	?	KL50	O12
n070	E10.1.kqs	effluent	2017-10-09	*K. quasipneumoniae subsp. similipneumoniae*	NA	?	KL56	O12
n071	E10.2.kvv	effluent	2017-10-10	*K. variicola subsp. variicola*	NA	?	KL19	O3/O3a
n072	E10.3.kv	effluent	2017-10-11	*K. quasivariicola*	NA	3899	KL153	O2v2
n073	E11.1.kqq	effluent	2017-11-06	*K. quasipneumoniae subsp. quasipneumoniae*	10	2604	KL60	O3/O3a
n074	E11.2.kqq	effluent	2017-11-06	*K. quasipneumoniae subsp. quasipneumoniae*	10	2604	KL60	O3/O3a
n075	E11.3.kqq	effluent	2017-11-06	*K. quasipneumoniae subsp. quasipneumoniae*	10	2604	KL60	O3/O3a
n076	H01.1.kqs	hospital	2017-01-16	*K. quasipneumoniae subsp. similipneumoniae*	6	3318	KL144	O12
n077	H01.2.kqs	hospital	2017-01-16	*K. quasipneumoniae subsp. similipneumoniae*	6	3318	KL144	O12
n078	H01.3.kp	hospital	2017-01-16	*K. pneumoniae*	NA	2791	KL48	O1v1
n079	H02.1.kqs	hospital	2017-02-06	*K. quasipneumoniae subsp. similipneumoniae*	6	3318	KL144	O12
n080	H02.2.kqs	hospital	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	6	3318	KL144	O12
n081	H02.3.kqs	hospital	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	6	3318	KL144	O12
n082	H02.4.kqs	hospital	2017-02-27	*K. quasipneumoniae subsp. similipneumoniae*	6	3318	KL144	O12
n083	H02.5.kqs	hospital	2017-02-28	*K. quasipneumoniae subsp. similipneumoniae*	6	3318	KL144	O12
n084	H03.1.kqs	hospital	2017-03-28	*K. quasipneumoniae subsp. similipneumoniae*	6	3318	KL144	O12
n085	H03.2.kvv	hospital	2017-03-28	*K. variicola subsp. variicola*	12	681	KL143	O5
n086	H03.3.kvv	hospital	2017-03-28	*K. variicola subsp. variicola*	13	2006	KL60	O5
n087	H04.1.kv	hospital	2017-04-25	*K. quasivariicola*	NA	1214	KL51	O2v2
n088	H04.2.kvv	hospital	2017-04-25	*K. variicola subsp. variicola*	12	681	KL143	O5
n089	H04.3.kvv	hospital	2017-04-25	*K. variicola subsp. variicola*	NA	641	KL60	O5
n090	H05.1.kp	hospital	2017-05-22	*K. pneumoniae*	9	336	KL25	O5
n091	H05.2.kqs	hospital	2017-05-23	*K. quasipneumoniae subsp. similipneumoniae*	NA	3512	KL47	O3/O3a
n092	H05.3.kp	hospital	2017-05-23	*K. pneumoniae*	NA	234	KL30	O1v2
n093	H06.1.kp	hospital	2017-06-19	*K. pneumoniae*	11	1898	KL140	O1v2
n094	H07.1.kp	hospital	2017-07-17	*K. pneumoniae*	11	1898	KL140	O1v2
n095	H07.2.kp	hospital	2017-07-17	*K. pneumoniae*	11	1898	KL140	O1v2
n097	H08.1.kvv	hospital	2017-08-15	*K. variicola subsp. variicola*	13	2006	KL60	O5
n098	H08.2.kvv	hospital	2017-08-16	*K. variicola subsp. variicola*	NA	454	KL67	OL103
n099	H08.3.kv	hospital	2017-08-16	*K. quasivariicola*	NA	?	KL51	O2v2
n100	H09.1.kvv	hospital	2017-09-11	*K. variicola subsp. variicola*	NA	1980	KL125	O5
n101	H09.2.kvv	hospital	2017-09-11	*K. variicola subsp. variicola*	NA	?	KL31	O3/O3a
n102	H09.3.kvv	hospital	2017-09-11	*K. variicola subsp. variicola*	NA	454	KL67	OL103
n103	H10.1.kp	hospital	2017-10-09	*K. pneumoniae*	9	336	KL25	O5
n104	H10.2.kp	hospital	2017-10-09	*K. pneumoniae*	NA	453	KL8	O2v2
n105	H10.3.kqq	hospital	2017-10-10	*K. quasipneumoniae subsp. quasipneumoniae*	NA	526	KL33	O12
n106	H11.1.kp	hospital	2017-11-06	*K. pneumoniae*	9	336	KL25	O5
n107	H11.2.kvv	hospital	2017-11-07	*K. variicola subsp. variicola*	NA	4966	KL142	O3/O3a
n108	H11.3.kvv	hospital	2017-11-07	*K. variicola subsp. variicola*	NA	?	KL56	OL103
n109	H12.1.kp	hospital	2017-12-04	*K. pneumoniae*	NA	336	KL25	O5
n110	H12.2.kp	hospital	2017-12-04	*K. pneumoniae*	15	336	KL25	O5
n111	H12.3.kp	hospital	2017-12-04	*K. pneumoniae*	15	336	KL25	O5
n112	I01.1.kqq	influent	2017-01-16	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL113	O2v2
n113	I01.2.kqq	influent	2017-01-16	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n114	I01.3.kv	influent	2017-01-17	*K. quasivariicola*	NA	?	KL51	O2v2
n115	I02.1.kqq	influent	2017-02-06	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n116	S02.1.kqq	surface water	2017-02-07	*K. quasipneumoniae subsp. quasipneumoniae*	1	?	KL104	O2v2
n117	I02.3.kqq	influent	2017-02-06	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL5	O2v2
n118	I02.4.kqq	influent	2017-02-06	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n119	I02.5.kqq	influent	2017-02-06	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n120	I02.6.kqs	influent	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n121	I02.7.kqs	influent	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n122	I02.8.kqs	influent	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n123	I02.9.kqs	influent	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n124	I02.10.kqs	influent	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	3	138	KL1	O5
n125	I02.11.kqq	influent	2017-02-28	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v2
n126	I03.1.kqq	influent	2017-03-27	*K. quasipneumoniae subsp. quasipneumoniae*	1	?	KL104	O2v2

Number	Name	Source	Isolation date	Species	cgMLST cluster	ST	K_locus	O_locus
n127	I03.2.kqq	influent	2017-03-27	*K. quasipneumoniae subsp. quasipneumoniae*	1	?	KL104	O2v2
n128	I03.3.kvv	influent	2017-03-28	*K. variicola subsp. variicola*	NA	475	KL53	O3/O3a
n129	I04.1.kqs	influent	2017-04-24	*K. quasipneumoniae subsp. similipneumoniae*	NA	?	KL151	OL103
n130	I04.2.kqq	influent	2017-04-24	*K. quasipneumoniae subsp. quasipneumoniae*	NA	4756	KL104	O2v2
n131	I04.3.kqs	influent	2017-04-25	*K. quasipneumoniae subsp. similipneumoniae*	21	?	KL56	O12
n132	I05.1.kvv	influent	2017-05-22	*K. variicola subsp. variicola*	NA	695	KL17	O5
n133	I05.2.kqs	influent	2017-05-22	*K. quasipneumoniae subsp. similipneumoniae*	19	1795	KL101	O3/O3a
n134	I05.3.kp	influent	2017-05-23	*K. pneumoniae*	NA	661	KL35	O3b
n135	I06.1.kqs	influent	2017-06-19	*K. quasipneumoniae subsp. similipneumoniae*	22	?	KL64	O12
n136	I06.2.kqq	influent	2017-06-19	*K. quasipneumoniae subsp. quasipneumoniae*	NA	2604	KL60	O3/O3a
n137	I06.3.kqq	influent	2017-06-20	*K. quasipneumoniae subsp. quasipneumoniae*	1	4756	KL104	O2v1
n138	I07.1.kvv	influent	2017-07-17	*K. variicola subsp. variicola*	NA	4609	KL107	OL101
n139	I07.2.kqs	influent	2017-07-18	*K. quasipneumoniae subsp. similipneumoniae*	7	3595	KL107	O12
n140	I07.3.kqs	influent	2017-07-18	*K. quasipneumoniae subsp. similipneumoniae*	7	3595	KL107	O12
n141	I08.1.kp	influent	2017-08-15	*K. pneumoniae*	17	?	KL39	O2v2
n142	I08.2.kp	influent	2017-08-15	*K. pneumoniae*	NA	873	KL107	OL101
n143	I08.3.kqs	influent	2017-08-15	*K. quasipneumoniae subsp. similipneumoniae*	7	3595	KL126	O12
n144	I09.1.kqs	influent	2017-09-11	*K. quasipneumoniae subsp. similipneumoniae*	21	?	KL107	O12
n145	I09.2.kqs	influent	2017-09-12	*K. quasipneumoniae subsp. similipneumoniae*	NA	4218	KL8	O3b
n146	I09.3.kp	influent	2017-09-12	*K. pneumoniae*	NA	730	KL19	O2v2
n147	I10.1.kqs	influent	2017-10-10	*K. quasipneumoniae subsp. similipneumoniae*	NA	3318	KL146	O12
n148	I10.2.kqs	influent	2017-10-10	*K. quasipneumoniae subsp. similipneumoniae*	NA	3318	KL146	O12
n149	I10.3.kp	influent	2017-10-11	*K. pneumoniae*	NA	22	KL9	O2v2
n150	I11.1.kqs	influent	2017-11-06	*K. quasipneumoniae subsp. similipneumoniae*	22	?	KL64	O12
n151	I11.2.kqs	influent	2017-11-06	*K. quasipneumoniae subsp. similipneumoniae*	NA	3318	KL107	O12
n152	I11.3.kp	influent	2017-11-06	*K. pneumoniae*	NA	730	KL104	O1v1
n153	I12.1.kp	influent	2017-12-04	*K. pneumoniae*	NA	29	KL30	O1v2
n154	I12.2.kvv	influent	2017-12-04	*K. variicola subsp. variicola*	NA	695	KL17	O5
n155	I12.3.kv	influent	2017-12-05	*K. quasivariicola*	NA	?	KL51	O2v2
n156	N01.1.kqs	nursing-home	2017-01-16	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n157	N01.2.kqs	nursing-home	2017-01-16	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n158	N01.3.kvv	nursing-home	2017-01-17	*K. variicola subsp. variicola*	NA	?	KL11	O3/O3a
n159	N02.1.kqs	nursing-home	2017-02-06	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n160	N02.2.kqs	nursing-home	2017-02-06	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n161	N02.3.kqs	nursing-home	2017-02-07	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n162	N02.4.kvv	nursing-home	2017-02-27	*K. variicola subsp. variicola*	4	1485	KL20	O3/O3a
n163	N03.1.kqs	nursing-home	2017-03-27	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n164	N03.2.kqs	nursing-home	2017-03-27	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n165	N03.3.kqq	nursing-home	2017-03-28	*K. quasipneumoniae subsp. quasipneumoniae*	NA	?	KL39	O5
n166	N04.1.kvv	nursing-home	2017-04-24	*K. variicola subsp. variicola*	4	1485	KL20	O3/O3a
n167	N04.2.kvv	nursing-home	2017-04-24	*K. variicola subsp. variicola*	4	1485	KL20	O3/O3a
n168	N04.3.kvv	nursing-home	2017-04-24	*K. variicola subsp. variicola*	4	1485	KL20	O3/O3a
n169	N05.1.kqs	nursing-home	2017-05-22	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n170	N05.2.kqs	nursing-home	2017-05-23	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n171	N05.3.kvv	nursing-home	2017-05-23	*K. variicola subsp. variicola*	8	6100	KL53	O3/O3a
n172	N06.1.kvv	nursing-home	2017-06-20	*K. variicola subsp. variicola*	8	6100	KL53	O3/O3a
n173	N06.2.kvv	nursing-home	2017-06-20	*K. variicola subsp. variicola*	8	6100	KL53	O3/O3a
n174	N06.3.kvv	nursing-home	2017-06-20	*K. variicola subsp. variicola*	4	1485	KL20	O3/O3a
n175	N07.1.kvv	nursing-home	2017-07-17	*K. variicola subsp. variicola*	8	6100	KL53	O3/O3a
n176	N07.2.kvv	nursing-home	2017-07-18	*K. variicola subsp. variicola*	8	6100	KL53	O3/O3a
n177	N07.3.kvv	nursing-home	2017-07-18	*K. variicola subsp. variicola*	8	6100	KL53	O3/O3a
n178	N08.1.kqs	nursing-home	2017-08-14	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n179	N08.2.kqs	nursing-home	2017-08-14	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n180	N08.3.kqs	nursing-home	2017-08-14	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n181	N09.1.kvv	nursing-home	2017-09-12	*K. variicola subsp. variicola*	NA	1562	KL114	O3/O3a
n182	N09.2.kvv	nursing-home	2017-09-12	*K. variicola subsp. variicola*	NA	2594	KL134	O3/O3a
n183	N09.3.kvv	nursing-home	2017-09-12	*K. variicola subsp. variicola*	4	1485	KL20	O3/O3a
n184	N10.1.kqs	nursing-home	2017-10-09	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL126	O12
n185	N10.2.kvv	nursing-home	2017-10-09	*K. variicola subsp. variicola*	4	1485	KL20	O3/O3a
n186	N10.3.kp	nursing-home	2017-10-10	*K. pneumoniae*	NA	626	KL54	O1v1
n187	N11.1.kvv	nursing-home	2017-11-07	*K. variicola subsp. variicola*	4	1485	KL20	O3/O3a
n188	N11.2.kvv	nursing-home	2017-11-07	*K. variicola subsp. variicola*	4	1485	KL20	O3/O3a
n189	N11.3.kqs	nursing-home	2017-11-07	*K. quasipneumoniae subsp. similipneumoniae*	2	?	KL107	O12
n190	N12.1.kvv	nursing-home	2017-12-04	*K. variicola subsp. variicola*	4	1485	KL20	O3/O3a
n191	N12.2.kvv	nursing-home	2017-12-05	*K. variicola subsp. variicola*	NA	641	KL71	O5
n192	N12.3.kp	nursing-home	2017-12-05	*K. pneumoniae*	NA	461	KL62	O1v2

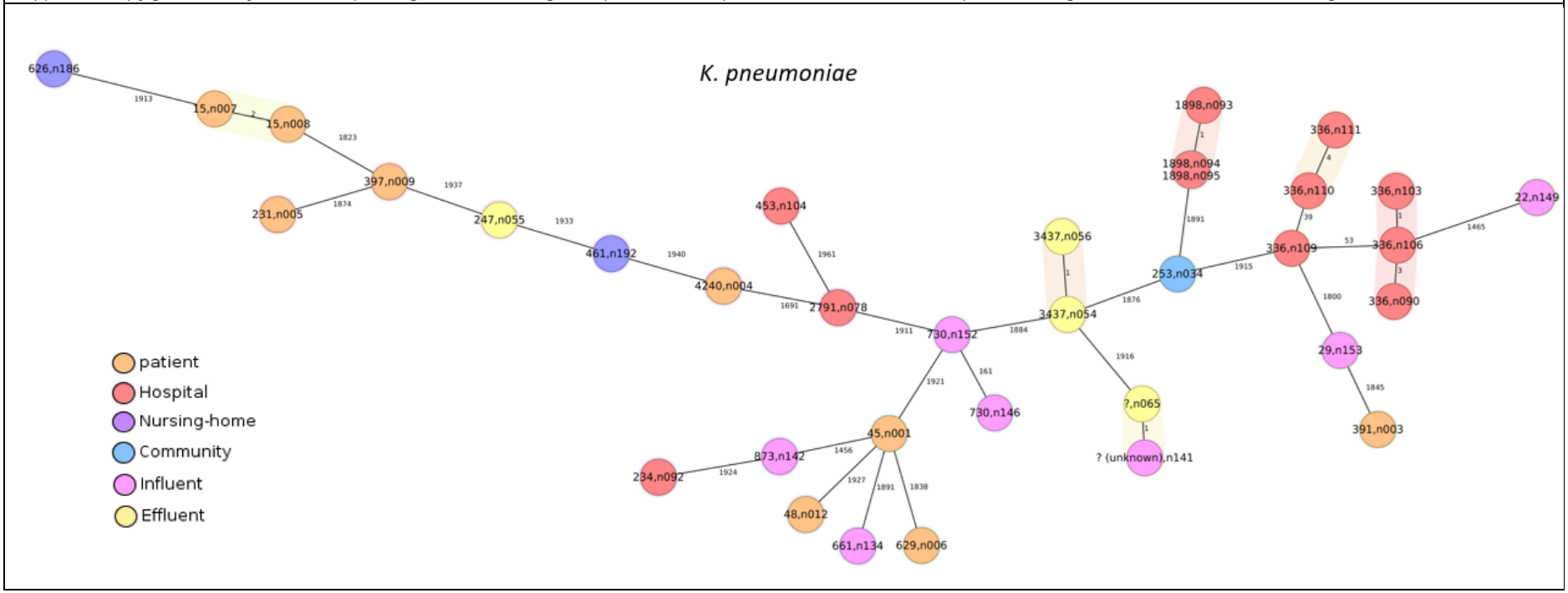
Supplementary figure SF1-a: minimum spanning tree based on cgMLST. Isolates are coloured by sources. Shading shows which isolates cluster together.

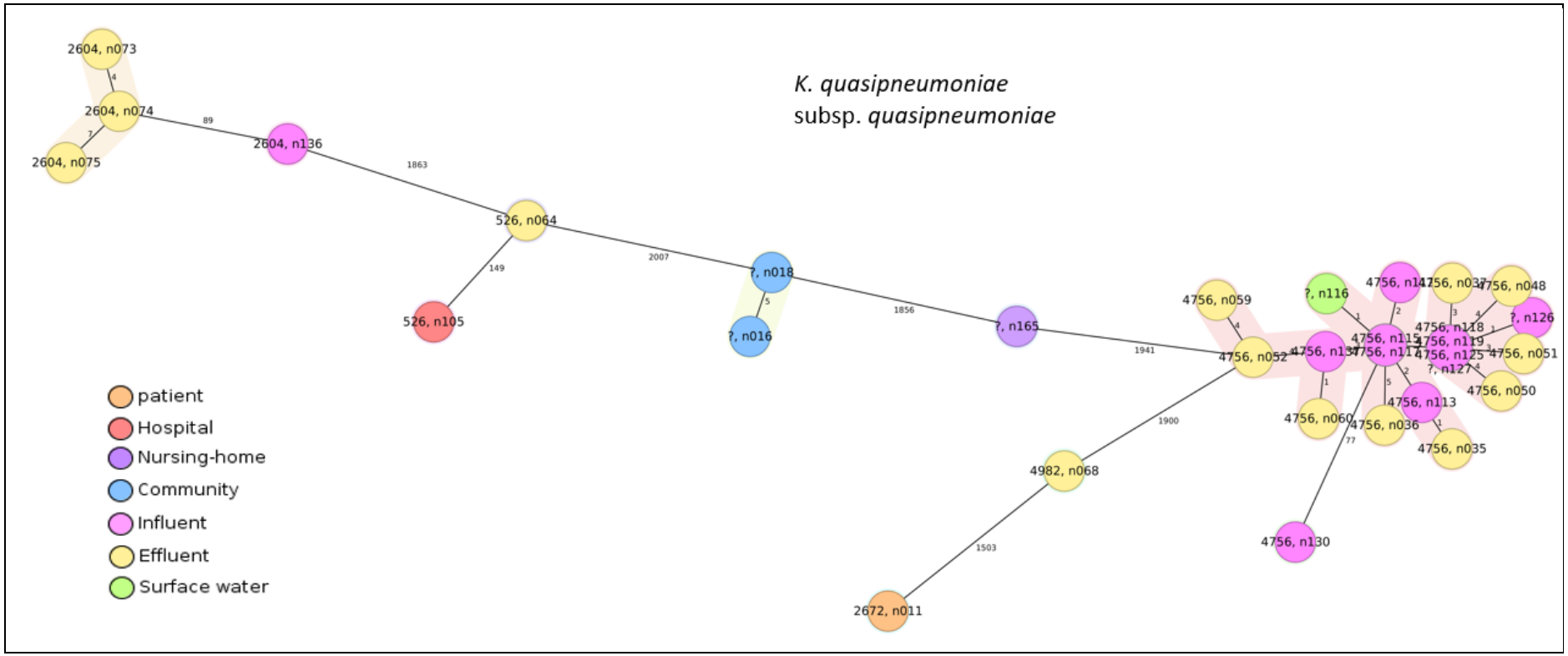


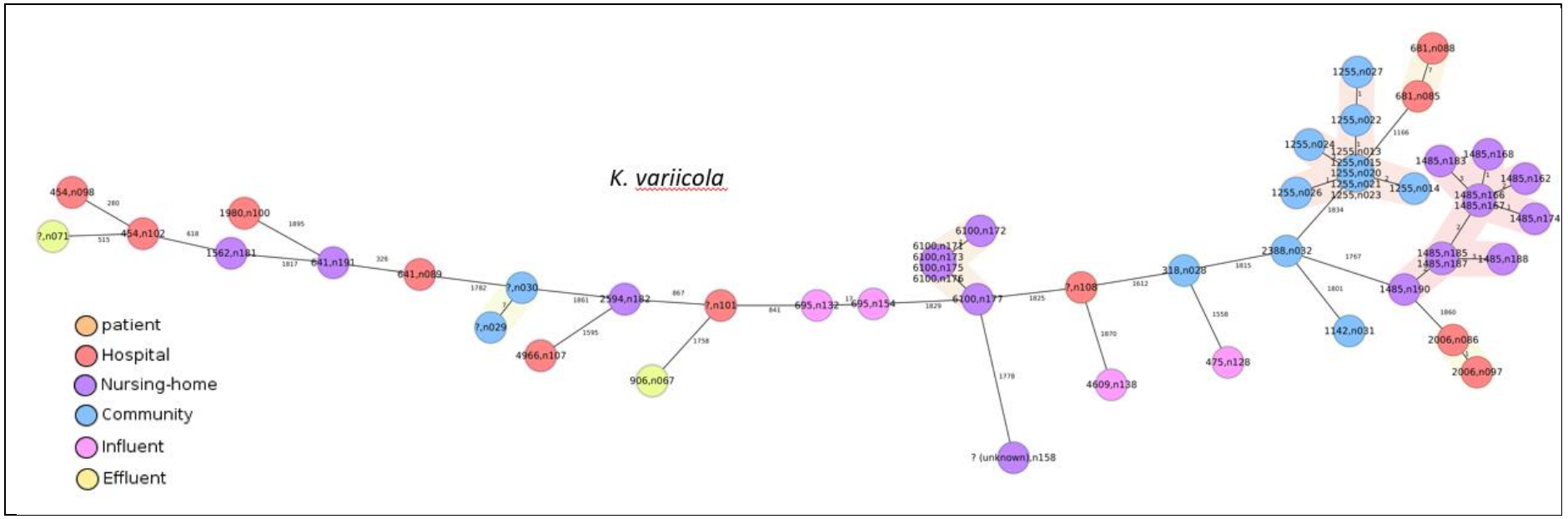
Supplementary figure SF1-b: minimum spanning tree based on cgMLST. Isolates are coloured by species. Shading shows which isolates cluster together.

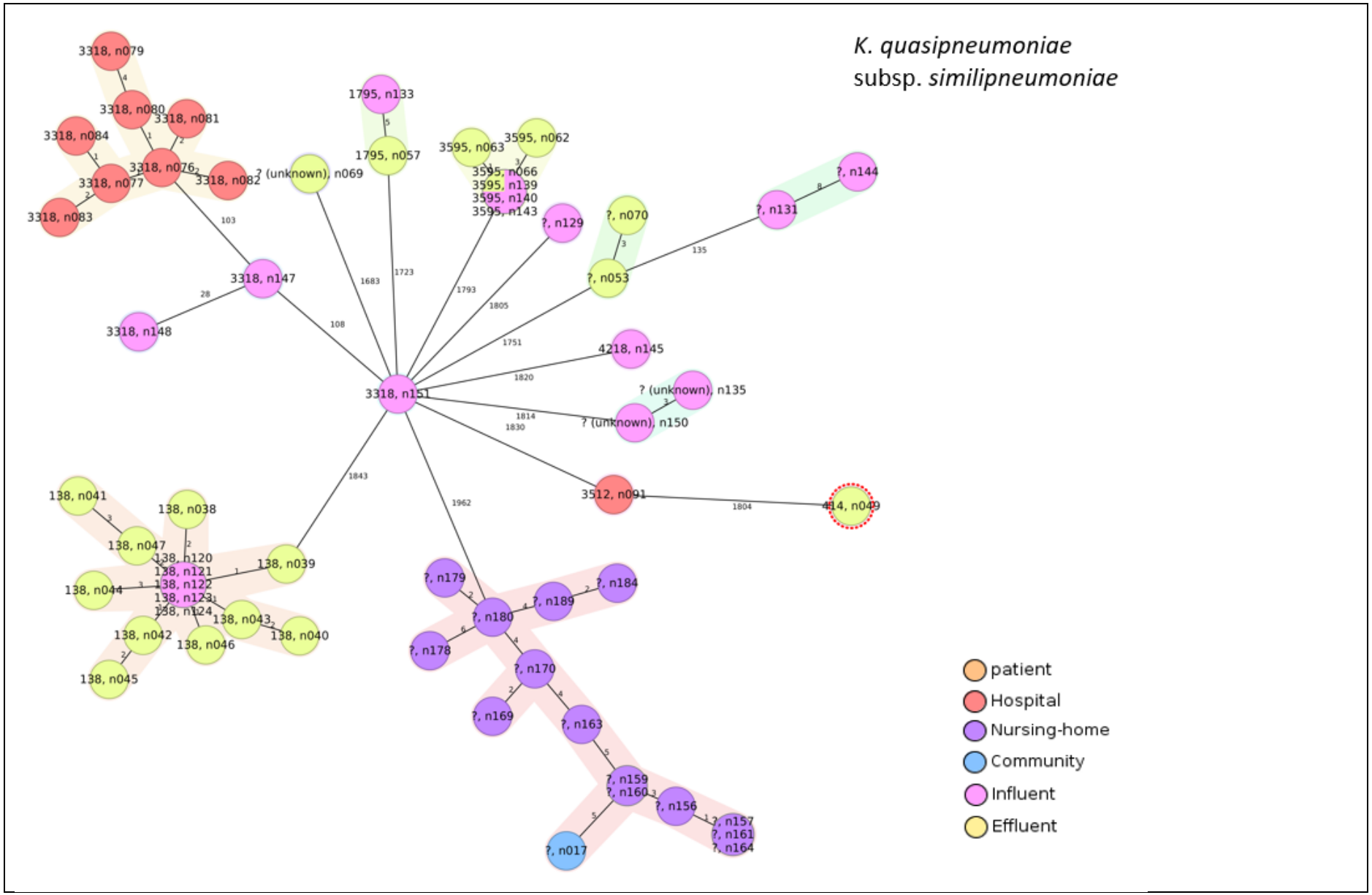


Supplementary figures SF1-c-f: minimum spanning tree based on cgMLST per Klebsiella species. Isolates are coloured by STs. Shading shows which isolates cluster together.




K. quasipneumoniae
subsp. *quasipneumoniae*
2604, n073
2604, n074
2604, n075
2604, n136
526, n064
526, n105
?, n018
?, n016
?, n165
4756, n059
4756, n052
?, n116
4756, n137
4756, n115
4756, n114
4756, n037
4756, n048
?, n126
4756, n118
4756, n119
4756, n125
?, n127
4756, n051
4756, n050
4756, n113
4756, n060
4756, n036
4756, n035
4756, n130
4982, n068
2672, n011
89
1863
149
2007
5
1856
1941
1900
1503
77
patient
Hospital
Nursing-home
Community
Influent
Effluent
Surface water

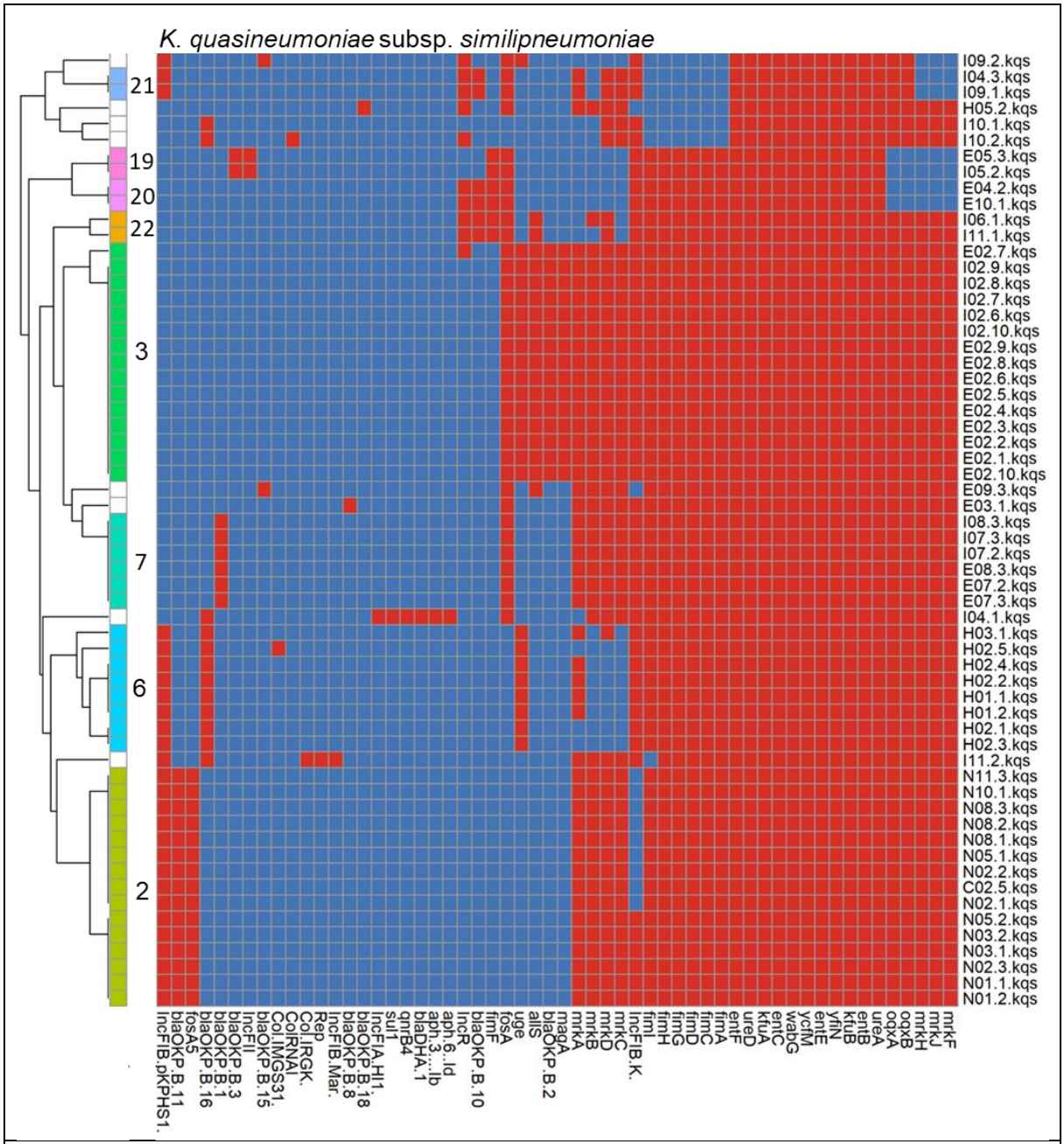

K. variicola
patient
Hospital
Nursing-home
Community
Influent
Effluent
454,n098
?,n071
454,n102
1980,n100
1562,n181
641,n191
641,n089
?,n030
?,n029
4966,n107
2594,n182
906,n067
?,n101
695,n132
695,n154
6100,n172
6100,n171
6100,n173
6100,n175
6100,n176
6100,n177
? (unknown),n158
?,n108
4609,n138
318,n028
475,n128
2388,n032
1255,n027
681,n088
681,n085
1255,n022
1255,n024
1255,n023
1255,n015
1255,n020
1255,n021
1255,n023
1255,n026
1255,n014
1142,n031
1485,n190
1485,n183
1485,n168
1485,n162
1485,n166
1485,n167
1485,n174
1485,n185
1485,n188
2006,n086
2006,n097


K. quasipneumoniae
subsp. *similipneumoniae*
3318, n079
3318, n080
3318, n081
3318, n084
3318, n076
3318, n082
3318, n077
3318, n083
3318, n147
3318, n148
1795, n133
1795, n057
? (unknown), n069
3595, n063
3595, n062
3595, n066
3595, n139
3595, n140
3595, n143
?, n129
?, n070
?, n053
?, n131
?, n144
3318, n151
4218, n145
? (unknown), n135
? (unknown), n150
3512, n091
414, n049
138, n041
138, n038
138, n047
138, n120
138, n121
138, n122
138, n123
138, n124
138, n039
138, n044
138, n043
138, n040
138, n042
138, n046
138, n045
?, n179
?, n184
?, n189
?, n180
?, n178
?, n170
?, n169
?, n163
?, n159
?, n160
?, n156
?, n157
?, n161
?, n164
?, n017
patient
Hospital
Nursing-home
Community
Influent
Effluent

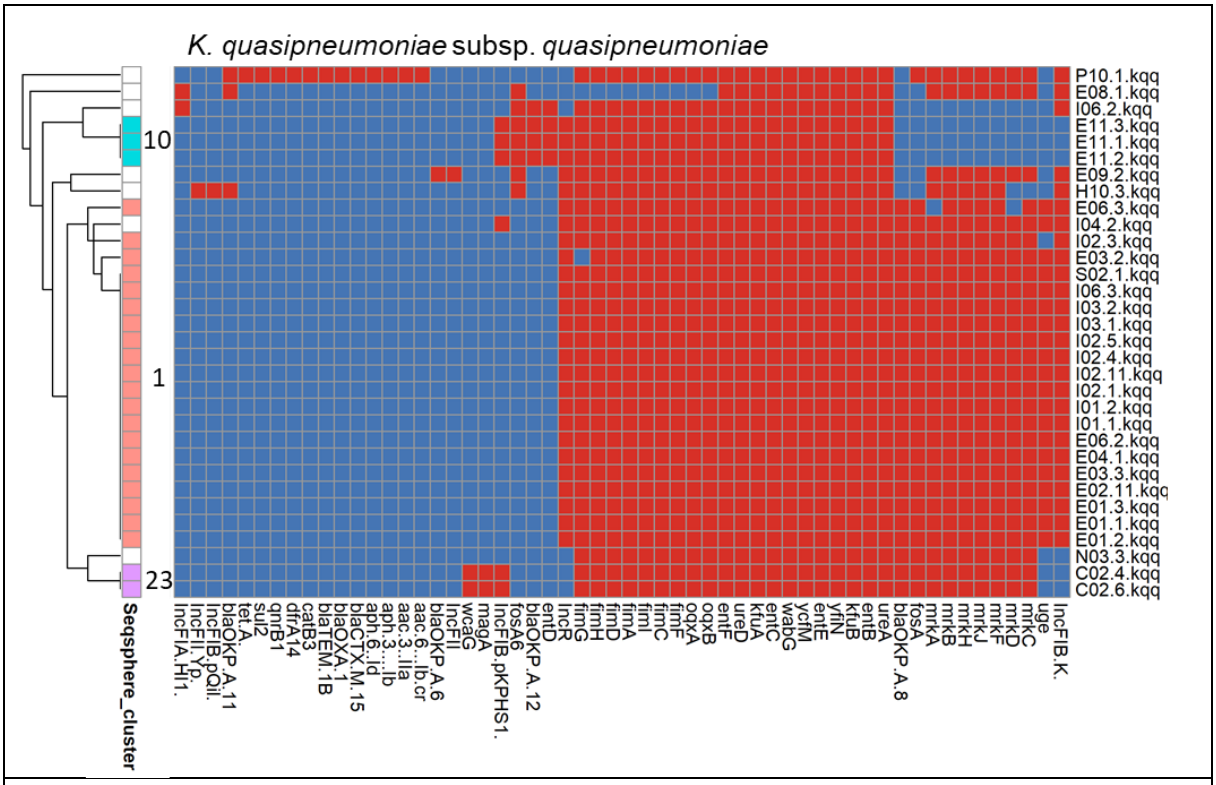
Supplementary Table ST2: The cgMLST clusters, nr of isolates, nr of samples from which isolates were obtained, allele difference range within the cluster, ST, subspecies and source(s). clusters consisting of strains from only one sampling day are indicated in red.

cgMLST cluster	nr of isolates	Nr of samples	allele difference range	ST	subspecies	Source(s)
1	20	13	0-12	ST4756 (n = 17) + NA (n = 3)	*K. quasipneumoniae subsp. quasipneumoniae*	Influent & effluent
2	15	10	0-13	NA	*K. quasipneumoniae subsp. similipneumoniae*	Nursing home & community
3	15	3	0-7	ST138	*K. quasipneumoniae subsp. similipneumoniae*	Influent & effluent
4	10	7	0-8	ST1485	*K. variicola subsp. variicola*	Nursing home
5	10	6	0-3	ST1255	*K. variicola subsp. variicola*	Community
6	8	6	1-7	ST3318	*K. quasipneumoniae subsp. similipneumoniae*	Hospital
7	6	5	0-4	ST3595	*K. quasipneumoniae subsp. similipneumoniae*	Influent & effluent
8	6	4	0-2	ST6100	*K. variicola subsp. variicola*	Nursing home
9	3	3	1-4	ST336	*K. pneumoniae subsp. pneumoniae*	Hospital
10	3	1	4-8	ST2604	*K. quasipneumoniae subsp. quasipneumoniae*	Effluent
11	3	2	0-1	ST1898	*K. pneumoniae subsp. pneumoniae*	Hospital
12	2	2	7	ST681	*K. variicola subsp. variicola*	Hospital
13	2	2	1	ST2006	*K. variicola subsp. variicola*	Hospital
14	2	2	7	NA	*K. variicola subsp. variicola*	Community
15	2	1	4	ST336	*K. pneumoniae subsp. pneumoniae*	Hospital
16	2	2	1	ST3437	*K. pneumoniae subsp. pneumoniae*	Effluent
17	2	2	1	NA	*K. pneumoniae subsp. pneumoniae*	Influent & effluent
18	2	1	3	ST15	*K. pneumoniae subsp. pneumoniae*	Patient
19	2	2	5	ST1795	*K. quasipneumoniae subsp. similipneumoniae*	Influent & effluent
20	2	2	3	NA	*K. quasipneumoniae subsp. similipneumoniae*	Effluent
21	2	2	8	NA	*K. quasipneumoniae subsp. similipneumoniae*	Influent
22	2	2	3	NA	*K. quasipneumoniae subsp. similipneumoniae*	Influent
23	2	1	5	NA	*K. quasipneumoniae subsp. quasipneumoniae*	Community

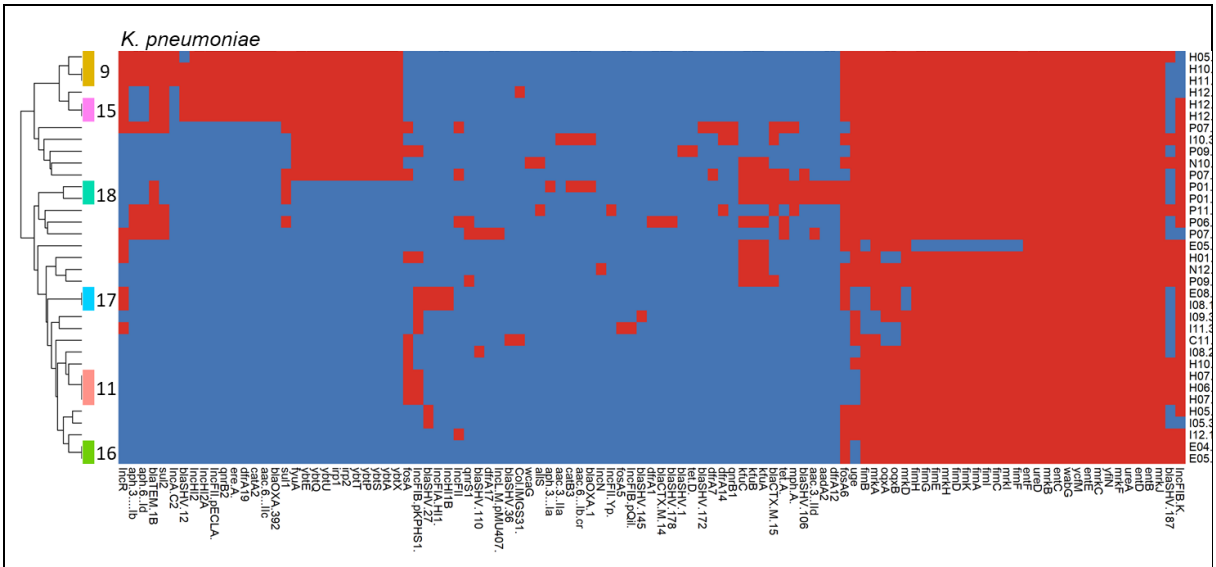
Supplementary figure SF2: clustering and gene presence per subspecies



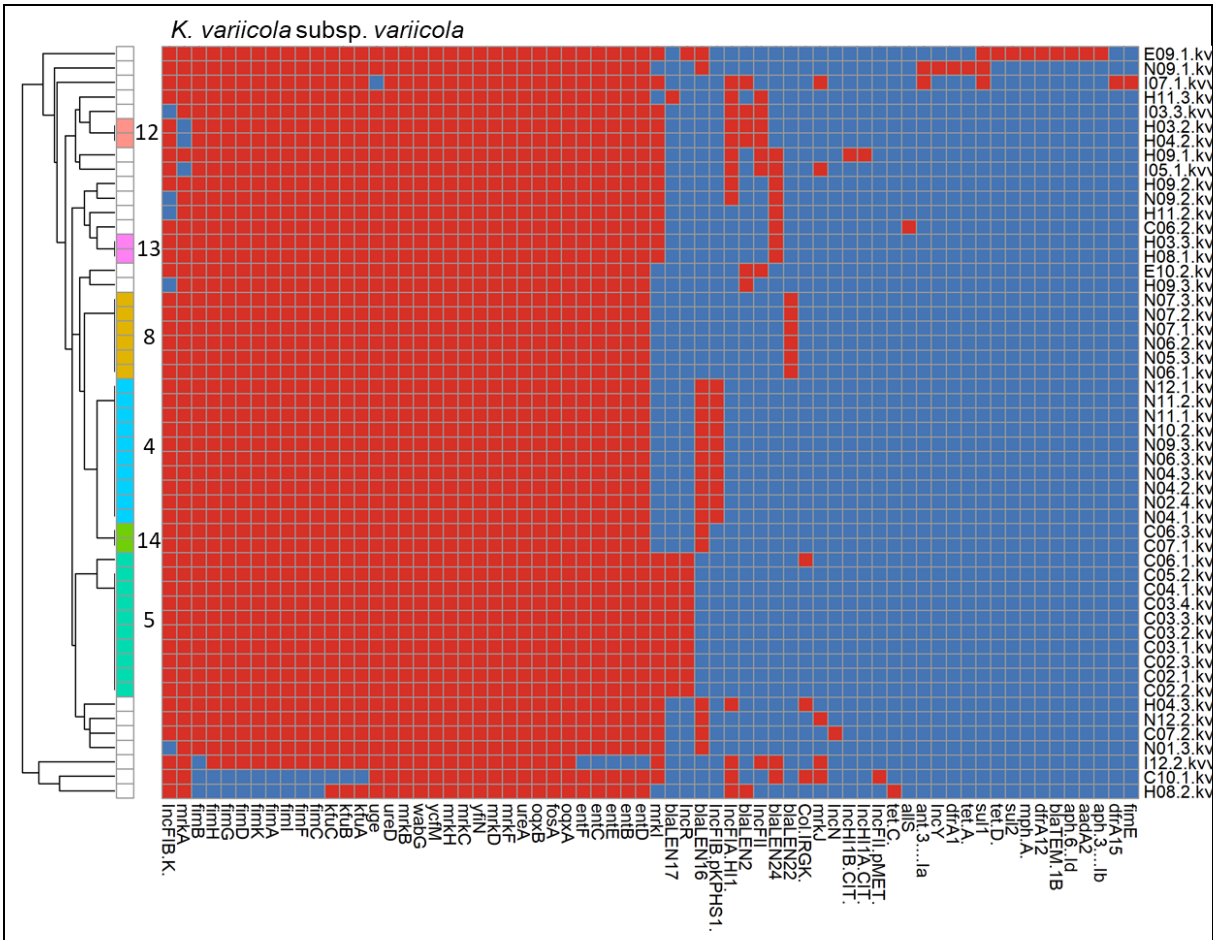
Supplementary figure SFII-a: clustering and genes found in K. quasipneumoniae subsp. similipneumoniae. Red = gene is present, blue = gene is not present. The dendogram on the left side shows how isolates are clustered by the ARGs, VF genes and plasmid replicon genes (method used: binary). The bar shows the clustering by cgMLST; different colours are different clusters. no colour means the isolate did not cluster with another isolate.



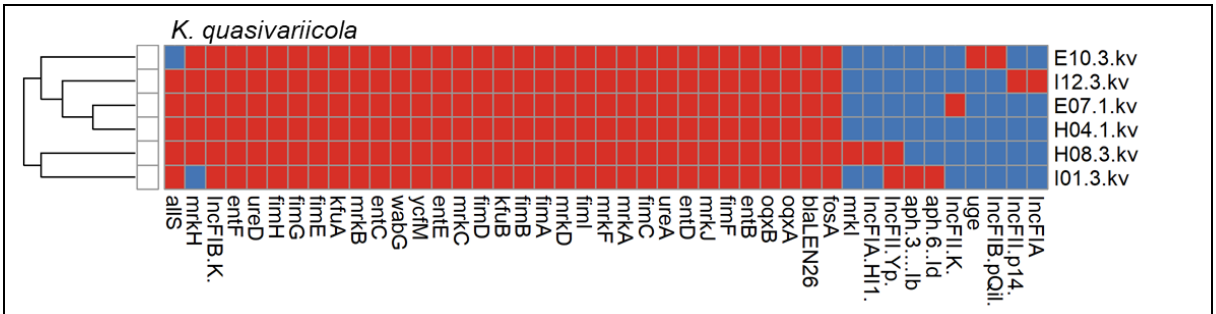
Supplementary figure SF2-b: clustering and genes found in K. quasipneumoniae subsp. quasipneumoniae. Red = gene is present, blue = gene is not present. The dendogram on the left side shows how isolates are clustered by the ARGs, VF genes and plasmid replicon genes (method used: binary). The bar shows the clustering by cgMLST; different colours are different clusters. no colour means the isolate did not cluster with another isolate.



Supplementary figure SF2-c: clustering and genes found in K. pneumoniae subsp. *pneumoniae. Red = gene is present, blue = gene is not present. The dendogram on the left side shows how isolates are clustered by the ARGs, VF genes and plasmid replicon genes (method used: binary). The bar shows the clustering by cgMLST; different colours are different clusters. no colour means the isolate did not cluster with another isolate; none of the K. quasivariicola subspecies were clustered.*

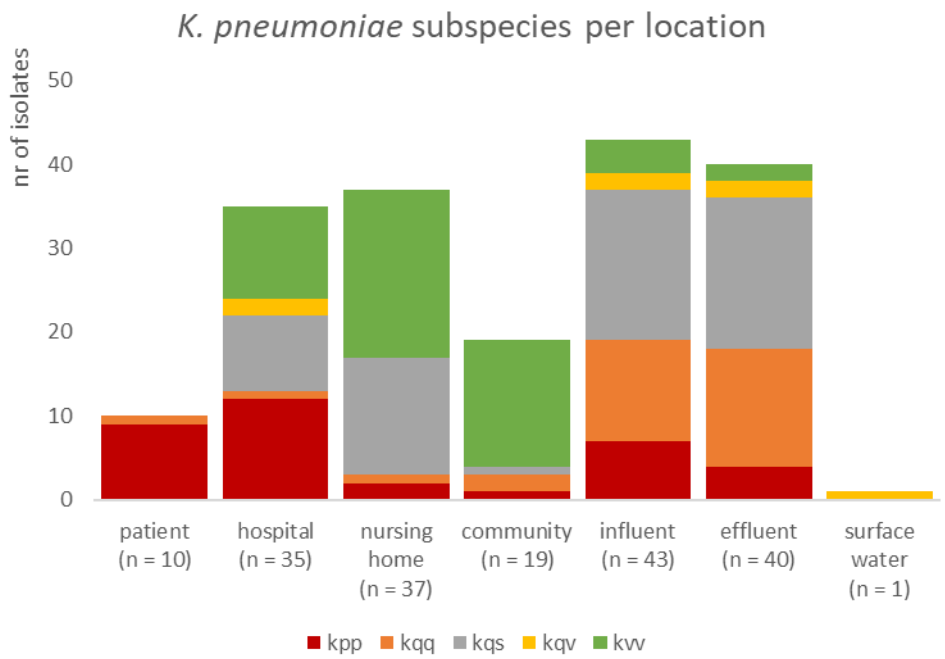


Supplementary figure SF2-d: clustering and genes found in K. variicola subsp. *variicola. Red = gene is present, blue = gene is not present. The dendogram on the left side shows how isolates are clustered by the ARGs, VF genes and plasmid replicon genes (method used: binary). The bar shows the clustering by cgMLST; different colours are different clusters. no colour means the isolate did not cluster with another isolate.*



Supplementary figure SF2-e: clustering and genes found in K. quasivariicola. Red = gene is present, blue = gene is not present. The dendogram on the left side shows how isolates are clustered by the ARGs, VF genes and plasmid replicon genes (method used: binary). The bar shows the clustering by cgMLST; different colours are different clusters. no colour means the isolate did not cluster with another isolate.

Supplementary figure SF3: distribution of *K. pneumoniae* subspecies over the locations.



Supplementary figure SF3: distribution of K. pneumoniae subspecies over the locations. kp = K. pneumonia subsp. pneumoniae; kqq = K. quasipneumoniae subsp. quasipneumoniae; kqs = K. quasipneumoniae subsp. similipneumoniae; kq = K. quasivariicola; kvv = K. variicola subsp. variicola

Supplementary Table ST3: distribution VF genes over Klebsiella subspecies.

VFKp		*Klebsiella pneumoniae* subsp. *pneumoniae* (n = 35)	*Klebsiella quasivariicola* (n = 6)	*Klebsiella quasipneumoniae* supbsp. *quasipneumoniae* (n =32)	*Klebsiella quasipneumoniae* supbsp. *similipneumoniae* (n = 60)	*Klebsiella variicola* subsp. *variicola* (n = 52)
Enterobactin	*entB*	35	6	32	60	51
	entC	35	6	32	60	51
	entD	35	6	4	0	51
	entE	35	6	32	60	51
	entF	35	6	32	60	51
Type 1 & Type 3 Fimbiae & yfiN	*fimA*	34	6	31	54	50
	fimB	30	6	0	0	49
	fimC	34	6	31	54	50
	fimD	34	6	31	54	50
	fimE	34	6	0	0	1
	fimF	34	6	31	6	50
	fimG	34	6	30	54	50
	fimH	34	6	31	54	50
	fimI	34	6	31	53	50
	fimK	34	0	0	0	50
	mrkA	33	6	27	47	49
	mrkB	35	6	28	42	52
	mrkC	35	6	27	45	52
	mrkD	33	6	26	48	52
	mrkF	35	6	28	53	52
	mrkH	34	5	28	53	52
	mrkI	34	1	0	0	29
	mrkJ	35	6	28	53	5
	yfiN	35	0	32	60	52
Yersiniabactin	*fyuA*	11	0	0	0	0
	ybtA	11	0	0	0	0
	ybtE	11	0	0	0	0
	ybtP	11	0	0	0	0
	ybtQ	11	0	0	0	0
	ybtS	11	0	0	0	0
	ybtT	11	0	0	0	0
	ybtU	11	0	0	0	0
	ybtX	11	0	0	0	0
Other	*irp1*	11	0	0	0	0
	irp2	11	0	0	0	0
	allS	2	5	0	18	1
	kfuA	9	6	32	60	51
	kfuB	9	6	32	60	51
	kfuC	9	0	0	0	51
	magA	0	0	2	15	0
	uge	27	1	20	24	51
	ureA	35	6	32	60	52
	ureD	35	6	32	60	52
	wabG	35	6	32	60	52
	wcaG	1	0	2	0	0
	ycfM	35	6	32	60	52

Supplementary Table ST4: distribution plasmid replicon genes over Klebsiella subspecies.

	Klebsiella pneumoniae subsp. *pneumoniae* (n = 35)	*Klebsiella quasivariicola* (n = 6)	*Klebsiella quasipneumoniae* supbsp. *quasipneumoniae* (n =32)	*Klebsiella quasipneumoniae* supbsp. *similipneumoniae* (n = 60)	*Klebsiella variicola* subsp. *variicola* (n = 52)
IncFII	4	0	1	2	8
IncFIB(K)*	29	6	26	49	47
IncFIA(HI1)	2	1	2	1	13
IncFIB(pKPHS1)	9	0	6	27	10
IncFII(Yp)	1	2	1	0	0
IncR*	13	0	26	10	11
Col(IMGS31)	2	0	0	1	0
IncN	1	0	0	0	1
IncFIB(pQil)	1	1	1	0	0
IncA-C2	3	0	0	0	0
IncL/M(pMU407)	1	0	0	0	0
IncHI1B	2	0	0	0	0
IncFII(pECLA)	**6**	0	0	0	0
IncHI2A	**6**	0	0	0	0
IncHI2	**6**	0	0	0	0
IncFII(p14)	0	1	0	0	0
IncFIA	0	1	0	0	0
IncFII(K)	0	1	0	0	0
Rep	0	0	0	1	0
IncFIB(Mar)	0	0	0	1	0
Col(IRGK)	0	0	0	1	3
ColRNAI	0	0	0	1	0
IncFII(pMET)	0	0	0	0	1
IncHI1B(CIT)	0	0	0	0	1
IncY*	0	0	0	0	1
IncHI1A(CIT)	0	0	0	0	1

*Two contigs containing IncFIB(K) were twice predicted as chromosomal by mlplasmids (posterior probability 0.511 and 0.772), but they were predicted as plasmid by RFPlasmid (votes 0.896 and 0.695). One contig containing IncR was predicted as chromosomal by mlplasmids (posterior probability 0.546), but it was as plasmid by RFPlasmid (votes 0.982). IncY was predicted to be located onto the chromosome by both mlplasmids (posterior probability = 0,809) and RFPlasmid (votes = 0,664).

Supplementary Table 5: distribution AMR genes over Klebsiella subspecies. Predicted chromosomal genes are shown in bolt.

antimicrobial	gene	*Klebsiella pneumoniae* subsp. *pneumoniae* (n = 35)	*Klebsiella quasivariicola* (n = 6)	*Klebsiella quasipneumoniae* supbsp. *quasipneumoniae* (n =32)	*Klebsiella quasipneumoniae* supbsp. *similipneumoniae* (n = 60)	*Klebsiella variicola* subsp. *variicola* (n = 52)
aminoglycosides	*aac(3)IIa*	1	0	1	0	0
	aac(3)-IId	3	0	0	0	0
	aac(6')-Ib-cr	2	0	1	0	0
	aac(6')-IIc	6	0	0	0	0
	aadA2	2	0	0	0	1
	ant(3'')-Ia	0	0	0	0	2
	aph(3'')-Ib	7	1	1	1	1
	aph(3')-Ia	1	0	0	0	0
	aph(6)-Id	7	1	1	1	1
chloramphenicol	*catA2*	6	0	0	0	0
	catB3	2	0	1	0	0
trimethoprim	*dfrA1*	1	0	0	0	1
	dfrA12	2	0	0	0	1
	dfrA14	3	0	1	0	0
	dfrA15	0	0	0	0	1
	dfrA17	1	0	0	0	0
	dfrA19	6	0	0	0	0
	dfrA7	2	0	0	0	0
macrolide	*ere(A)*	6	0	0	0	0
	mph(A)	4	0	0	0	1
fosfomycin	***fosA***	**10**	**6**	**25**	**34**	**52**
	fosA5	**1**	**0**	**0**	**15**	**0**
	fosA6	**23**	**0**	**7**	**0**	**0**
MDR efflux pump	***oqxA***	**32**	**6**	**31**	**56**	**52**
	oqxB	**32**	**6**	**31**	**56**	**52**
quinolone	*qnrB1*	2	0	1	0	0
	qnrB2	6	0	0	0	0
	qnrB4	0	0	0	1	0
	qnrS1	3	0	0	0	0
sulfonamide	*sul1*	11	0	0	1	3
	sul2	10	0	1	0	1
tetracycline	*tet(A)*	6	0	1	0	1
	tet(C)	0	0	0	0	1
	tet(D)	1	0	0	0	1

Supplementary Table 6: distribution bla-genes over Klebsiella subspecies. Predicted chromosomal genes are shown in bolt.

	Klebsiella pneumoniae subsp. p*neumoniae* (n = 35)	*Klebsiella quasivariicola* (n = 6)	*Klebsiella quasipneumoniae* supbsp. *quasipneumoniae* (n =32)	*Klebsiella quasipneumoniae* supbsp. *similipneumoniae* (n = 60)	*Klebsiella variicola* subsp. *variicola* (n = 52)
bla CTX-M-14	1	0	0	0	0
bla CTX-M-15	7	0	1	0	0
bla DHA-1	0	0	0	1	0
bla LEN16	0	0	0	0	18
bla LEN17	0	0	0	0	11
bla LEN2	0	0	0	0	7
bla LEN22	0	0	0	0	6
bla LEN24	0	0	0	0	10
bla LEN26	0	6	0	0	0
bla OKP-A-11	0	0	3	0	0
bla OKP-A-12	0	0	4	0	0
bla OKP-A-6	0	0	1	0	0
bla OKP-A-8	0	0	24	0	0
bla OKP-B-1	0	0	0	6	0
bla OKP-B-10	0	0	0	6	0
bla OKP-B-11	0	0	0	15	0
bla OKP-B-15	0	0	0	2	0
bla OKP-B-16	0	0	0	12	0
bla OKP-B-18	0	0	0	1	0
bla OKP-B-2	0	0	0	15	0
bla OKP-B-3	0	0	0	2	0
bla OKP-B-8	0	0	0	1	0
bla OXA-1	2	0	1	0	0
bla OXA-392	6	0	0	0	0
bla SHV-1	1	0	0	0	0
bla SHV-106	3	0	0	0	0
bla SHV-110	2	0	0	0	0
bla SHV-12*	5	0	0	0	0
bla SHV-145	1	0	0	0	0
bla SHV-172	1	0	0	0	0
bla SHV-178	1	0	0	0	0
bla SHV-187**	15	0	0	0	0
bla SHV-27	4	0	0	0	0
bla SHV-36	1	0	0	0	0
bla TEM-1B	12	0	1	0	1

*Three genes were predicted to be located on plasmid

**one gene was predicted to be located on plasmid

Supplementary Table 7: posterior probability (mlplasmids) and nr. of votes (RFPlasmid) of unexpected distributed bla-genes. Six isolates with unexpected distributed bla-genes contain yersiniabactin virulence genes (shown in red)

Isolate	Source	B-lactamase gene	Predicted location of contig	Posterior probability mlplasmids	Nr. Of votes RFPlasmid
P07.2 kp	Patient	*bla*$_{\text{CTX-M-15}}$	Chromosome	0,999	0,996
P09.2 kp	Patient	*bla*$_{\text{CTX-M-15}}$	Chromosome	0,999	0,997
I10.3 kp	Influent	*bla*$_{\text{CTX-M-15}}$	Chromosome	0,999	0,911
H11.1 kp	Hospital	*bla*$_{\text{SHV-12}}$	Plasmid	0,952	0,730
H12.1 kp	Hospital	*bla*$_{\text{SHV-12}}$	Plasmid	0,959	0,686
H12.3 kp	Hospital	*bla*$_{\text{SHV-12}}$	Plasmid	0,865	0,737
H05.1.kp	Hospital	*bla*$_{\text{SHV-187}}$	Plasmid	0,886	0,593