

**Supplementary Table 1. Details for locations in Karnataka from where milk samples were collected to obtain the isolates.**

<b>Isolate ID</b>	<b>Date of collection</b>	<b>Farm type</b>	<b>Location</b>	<b>Taluk</b>	<b>District</b>	<b>Region of the State</b>
KA1	17-09-2009	Organized	Huskur	Doddaballapura	Bengaluru Rural	Southeast
KA4	17-09-2009	Organized	Huskur	Doddaballapura	Bengaluru Rural	Southeast
KA6	06-10-2009	Organized	Bidar	Bidar	Bidar	Northeast
KA8	05-11-2009	Unorganized	Chikkanayakanahalli	Chikkanayakanahalli	Tumkur	Southeast
KA10	05-11-2009	Unorganized	Chikkanayakanahalli	Chikkanayakanahalli	Tumkur	Southeast
KA12	05-11-2009	Unorganized	Chikkanayakanahalli	Chikkanayakanahalli	Tumkur	Southeast
KA22	05-11-2009	Unorganized	Chikkanayakanahalli	Chikkanayakanahalli	Tumkur	Southeast
KA24	05-11-2009	Unorganized	Chikkanayakanahalli	Chikkanayakanahalli	Tumkur	Southeast
KA25	05-11-2009	Unorganized	Chikkanayakanahalli	Chikkanayakanahalli	Tumkur	Southeast
KA26	05-11-2009	Unorganized	Chikkanayakanahalli	Chikkanayakanahalli	Tumkur	Southeast
KA31	05-11-2009	Unorganized	Chikkanayakanahalli	Chikkanayakanahalli	Tumkur	Southeast
KA38	06-10-2009	Organized	Bidar	Bidar	Bidar	Northeast
KA41	15-12-2009	Organized	Hessaraghatta	Bengaluru North	Bengaluru Urban	Southeast
KA42	15-12-2009	Organized	Hessaraghatta	Bengaluru North	Bengaluru Urban	Southeast
KA46	15-12-2009	Organized	Hessaraghatta	Bengaluru North	Bengaluru Urban	Southeast
KA48	15-12-2009	Organized	Hessaraghatta	Bengaluru North	Bengaluru Urban	Southeast
KA55	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA56	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA57	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA58	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA59	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA60	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA61	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA62	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA63	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast

KA64	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA66	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA67	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA69	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA70	20-10-2010	Unorganized	Ballur	Anekal	Bengaluru Rural	Southeast
KA75	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA76	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA77	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA78	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA80	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA81	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA82	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA83	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA84	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA85	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA86	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA90	20-10-2010	Unorganized	Thammanayakanalli	Anekal	Bengaluru Rural	Southeast
KA94	20-10-2010	Organized	Ballur	Anekal	Bengaluru Rural	Southeast
KA103	24-01-2011	Organized	Hameelpura	Bidar	Bidar	Northeast
KA107	24-01-2011	Organized	Hameelpura	Bidar	Bidar	Northeast
KA115	25-01-2011	Organized	Bidar	Bidar	Bidar	Northeast
KA119	25-01-2011	Organized	Bidar	Bidar	Bidar	Northeast
KA123	26-01-2011	Organized	Bidar	Bidar	Bidar	Northeast
KA124	26-01-2011	Organized	Bidar	Bidar	Bidar	Northeast
KA128	02-02-2011	Unorganized	Gunnahalli	Bidar	Bidar	Northeast
KA131	02-02-2011	Unorganized	Gunnahalli	Bidar	Bidar	Northeast
KA132	02-02-2011	Unorganized	Gunnahalli	Bidar	Bidar	Northeast
KA133	02-02-2011	Unorganized	Gunnahalli	Bidar	Bidar	Northeast
KA134	02-02-2011	Unorganized	Gunnahalli	Bidar	Bidar	Northeast

KA135	02-02-2011	Unorganized	Gunnahalli	Bidar	Bidar	Northeast
KA138	02-02-2011	Unorganized	Gunnahalli	Bidar	Bidar	Northeast
KA140	02-02-2011	Unorganized	Gunnahalli	Bidar	Bidar	Northeast
KA144	02-02-2011	Unorganized	Gunnahalli	Bidar	Bidar	Northeast
KA145	02-02-2011	Unorganized	Gunnahalli	Bidar	Bidar	Northeast
KA148	04-02-2011	Unorganized	Mandakanalli	Bidar	Bidar	Northeast
KA149	04-02-2011	Unorganized	Mandakanalli	Bidar	Bidar	Northeast
KA150	04-02-2011	Unorganized	Mandakanalli	Bidar	Bidar	Northeast
KA151	04-02-2011	Unorganized	Mandakanalli	Bidar	Bidar	Northeast
KA152	04-02-2011	Unorganized	Mandakanalli	Bidar	Bidar	Northeast
KA154	04-02-2011	Unorganized	Mandakanalli	Bidar	Bidar	Northeast
KA155	04-02-2011	Unorganized	Mandakanalli	Bidar	Bidar	Northeast
KA156	04-02-2011	Unorganized	Mandakanalli	Bidar	Bidar	Northeast
KA159	02-02-2011	Unorganized	Jajanmugali	Basavakalyana	Bidar	Northeast
KA160	02-02-2011	Unorganized	Jajanmugali	Basavakalyana	Bidar	Northeast
KA161	02-02-2011	Unorganized	Jajanmugali	Basavakalyana	Bidar	Northeast
KA168	04-02-2011	Unorganized	Kadwad	Bidar	Bidar	Northeast
KA169	04-02-2011	Unorganized	Kadwad	Bidar	Bidar	Northeast
KA170	04-02-2011	Unorganized	Kadwad	Bidar	Bidar	Northeast
KA171	04-02-2011	Unorganized	Kadwad	Bidar	Bidar	Northeast
KA172	04-02-2011	Unorganized	Kadwad	Bidar	Bidar	Northeast
KA174	04-02-2011	Unorganized	Kadwad	Bidar	Bidar	Northeast
KA175	04-02-2011	Unorganized	Kadwad	Bidar	Bidar	Northeast
KA176	04-02-2011	Unorganized	Kadwad	Bidar	Bidar	Northeast
KA177	04-02-2011	Unorganized	Kadwad	Bidar	Bidar	Northeast
KA180	Unknown	Clinic	Bidar	Bidar	Bidar	Northeast
KA181	Unknown	Clinic	Bidar	Bidar	Bidar	Northeast
KA182	Unknown	Clinic	Bidar	Bidar	Bidar	Northeast
KA184	Unknown	Clinic	Bidar	Bidar	Bidar	Northeast

KA192	Unknown	Clinic	Bidar	Bidar	Bidar	Northeast
KA193	Unknown	Clinic	Bidar	Bidar	Bidar	Northeast
KA194	Unknown	Clinic	Bidar	Bidar	Bidar	Northeast
KA195	Unknown	Unorganized	Uppinangadi	Puttur	Dakshina Kannada	Southwest
KA196	Unknown	Unorganized	Uppinangadi	Puttur	Dakshina Kannada	Southwest
KA197	Unknown	Unorganized	Uppinangadi	Puttur	Dakshina Kannada	Southwest
KA198	Unknown	Unorganized	Uppinangadi	Puttur	Dakshina Kannada	Southwest
KA199	Unknown	Unorganized	Uppinangadi	Puttur	Dakshina Kannada	Southwest
KA200	Unknown	Unorganized	Uppinangadi	Puttur	Dakshina Kannada	Southwest
KA201	Unknown	Unorganized	Uppinangadi	Puttur	Dakshina Kannada	Southwest
KA202	Unknown	Unorganized	Shivamogga	Shivamogga	Shivamogga	Central
KA203	Unknown	Unorganized	Shivamogga	Shivamogga	Shivamogga	Central
KA204	Unknown	Unorganized	Shivamogga	Shivamogga	Shivamogga	Central
KA205	Unknown	Unorganized	Shivamogga	Shivamogga	Shivamogga	Central
KA206	Unknown	Unorganized	Shivamogga	Shivamogga	Shivamogga	Central
KA207	Unknown	Unorganized	Shivamogga	Shivamogga	Shivamogga	Central

Notes:

1. The locations in the Northeast and the Southeast are separated by at least 600 km. The Southwest and Central locations are each about 300 km from the locations in the Southeast. The Southwest and Central locations are about 800 and 650 km, respectively, from the Northeast location.
2. Unorganized means small holding of a few animals by farmers.

**Supplementary Table S2. Newly identified ST profiles in the study**

Isolate No.	ST	CC	arcC	aroE	glpF	gmk	pta	tpi	yqiL
GJ1	5407	8	3	3	1	1	8	8	6
GJ2	5408	97	3	1	487	1	4	5	3
GJ4	5410	30	2	2	5	2	4	3	3
GJ5	5408	97	3	1	487	1	1	5	3
GJ10	5411	97	3	1	487	1	1	5	10
GJ13	5411	97	3	1	487	1	1	5	10
GJ14	5408	97	3	1	487	1	1	5	3
GJ17	5413	8	1	4	1	8	4	4	9
GJ18	5414	97	3	1	487	1	1	5	96
GJ25	5408	97	3	1	487	1	1	5	3
GJ26	5415	97	1	1	487	8	1	5	3
MG19	5418	9	3	3	1	1	1	4	10
MG25	5418	9	3	3	1	1	1	4	10
MG32	5419	9	3	3	645	1	264	1	13
TG2	5419	9	3	3	645	1	264	1	13
TG13	5420	9	3	3	487	1	264	1	10
M35	5113	9	3	3	685	1	264	1	10
KA205	5418	9	3	3	1	1	1	4	10
KA207	5689	97	3	240	1	1	1	45	10

CC = Clonal Complex; GJ = Gujarat; KA = Karnataka; MG = Meghalaya; MH = Maharashtra; ST = Sequence Type; TG = Telangana; UP = Uttar Pradesh.

**Supplementary Table S3. Details of MRSA in the study**

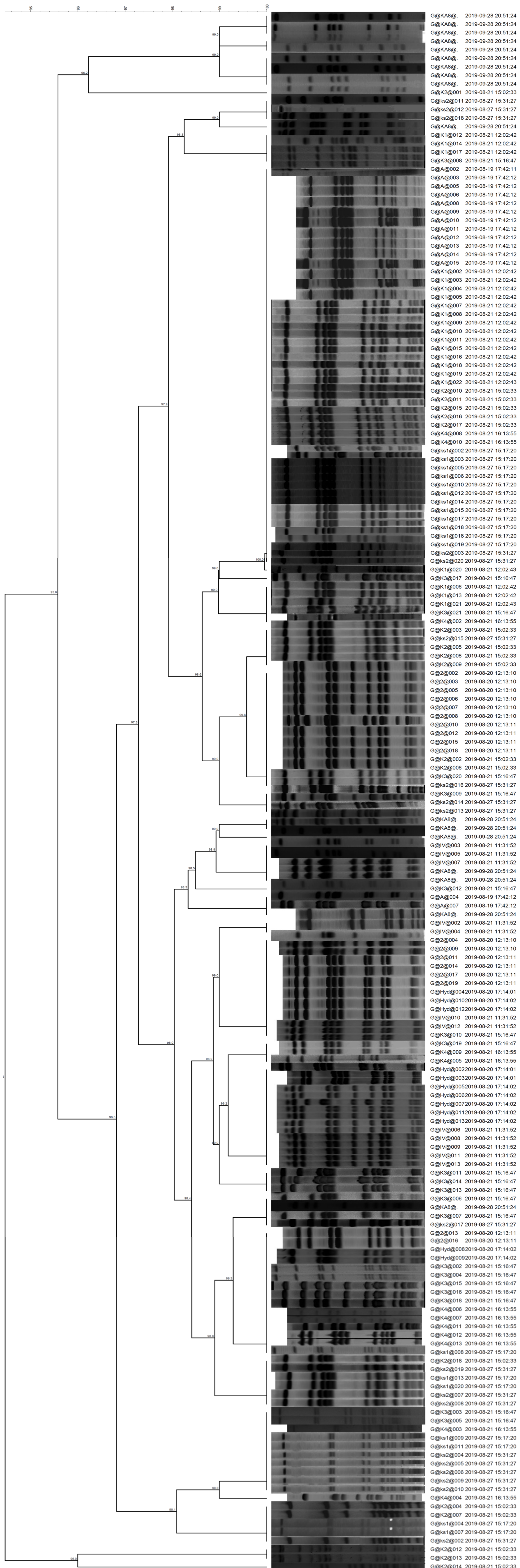
Isolate ID	Pulso type	OXA Disc	OXA MIC	<i>mec</i> A	SCC <i>mec</i> type	Toxin genes			spa type	ST	CC
						<i>hlg</i>	<i>tsst</i>	<i>pvl</i>			
KA10	G	R	32	+	IVd	+	+	+	t3380	2459	CC97
KA12	C1	R	16			+	-	-	t4793	6	CC5
KA24	C2	R	16			+	-	-	t359	2459	CC97
KA26	C1	R	16	+		+	-	+	t267	4992	CC97
KA54	B2	R	16			+	-	+	NT	2459	CC97
KA55	NT	R	32	+		+	-	+	t359	2459	CC97
KA60	C1	R	32	+	IVb	-	-	+	t359	2459	CC97
KA62	C1	R	16	+		+	-	+	t359	2459	CC97
KA69	G	R	>64	+	IVd	+	-	+	NT	NT	UA
KA70	C3	R	64			+	-	+	t267	1687	CC97
KA82	H	R	16	+		+	+	+	t359	2459	CC97
KA83	H	R	16	+		+	+	+	t359	2459	CC97
KA84	I	R	16	+	V	+	+	-	t359	2459	CC97
KA86	C1	R	64	+	IVb	-	-	+	NT	NT	UA
KA94	E8	R	32	+	IVb	+	-	+	t008	6	CC5
KA107	E8	R	16	+	IVb	-	-	-	t10760	4968	CC8
KA119	F1	R	32	+		+	+	+	NT	672	UA
KA128	F1	R	32	+		-	-	+	NT	NT	UA
KA135	E2	R	16			+	+	+	t2700	2454	CC9
KA169	C3	R	64	+		-	-	+	t359	4975	CC9
KA175	E7	R	16			+	+	+	t16344	2454	CC9
KA176	E7	R	32			+	+	+	t7867	9	CC1
KA193	E7	R	32	+		+	+	-	t4522	2454	CC9
KA196	D3	R	16			+	+	+	t002	3081	CC5
KA200	A1	R	32			+	-	+	t657	772	CC1
KA201	D4	R	16			+	-	+	t7287	5098	CC1
MG7	C4	R	32	+	IVb	-	-	-	t7867	2454	CC9
MG32	NT	R	32			-	-	-	t657	5419	CC9
TG14	E4	R	32	+	IVb	-	-	-	t7867	2454	CC9
TG15	E2	R	8	+	IVb	+	-	-	NT	2454	CC9
UP3	D3	R	>64	+	IVb	-	-	-	t7867	2454	CC9
UP7	D3	R	64			-	-	-	t17680	2454	CC9
UP14	E4	R	64			-	-	-	t7867	2454	CC9
UP15	NT	R	64			-	-	-	t4522	2454	CC9

CC = Clonal Complex; KA = Karnataka; MIC = minimum inhibitory concentration; MG = Meghalaya; NT = Non-typeable; OXA = oxacillin; ST = Sequence Type; TG = Telangana; UA = unassigned; UP = Uttar Pradesh.

**Supplementary Table S4. Details of OS-MRSA in the study**

Isolate ID	Pulso type	OXA Disc	OXA MIC	<i>mecA</i>	SCC <i>mec</i> type	Toxin genes			spa type	ST	CC
						<i>hlg</i>	<i>tsst</i>	<i>pvl</i>			
KA48	C2	S	2	+	IVb	+	-	+	t359	2459	CC97
KA63	C2	S	1	+	IVb	+	-	+	t267	97	CC97
KA76	G	S	1	+	V	+	-	+	NT	3881	CC1
KA77	C3	S	1	+	IVb	+	-	+	t2770	2459	CC97
KA78	C3	S	2	+	V	+	-	+	t267	1687	CC97
KA81	NT	S	1	+	IVb	+	-	-	t359	2459	CC97
KA90	NT	S	1	+	IVb	+	+	+	t7683	2459	CC97
KA123	F1	S	1	+	-	-	-	-	t2297	2453	CC97
KA133	B2	S	1	+	-	+	+	+	NT	1687	CC97
KA154	NT	S	1	+	IVb	+	+	+	t021	1482	CC30
KA172	C4	S	1	+	-	+	-	+	t3841	672	UA
MG3	C4	S	1	+	IVb	+	-	-	t7867	2454	CC9
MG5	C4	S	2	+	IVb	+	-	-	t17680	2454	CC9
MG8	C4	S	1	+	IVb	-	-	-	t1201	2459	CC97
MG9	NT	S	1	+	IVb	-	-	-	t1201	2454	CC9
MG10	E2	S	2	+	IVb	-	-	-	t4522	2454	CC9
MG19	E3	S	1	+	IVb	-	-	-	t2700	5418	CC9
MG38	E2	S	1	+	IVb	-	-	-	t4522	2454	CC9
MH16	A2	S	1	+	IVb	+	+	-	t7867	2454	CC9
TG4	E2	S	2	+	IVb	-	-	-	t4522	2454	CC9
TG10	E2	S	1	+	IVb	-	-	-	t4522	2454	CC9
UP2	E1	S	1	+	IVb	-	-	-	t7867	2454	CC9
UP5	D3	S	1	+	IVb	-	-	-	t17680	2454	CC9
UP6	E4	S	2	+	IVb	-	+	-	t7867	2454	CC9

CC = Clonal Complex; KA = Karnataka; MIC = minimum inhibitory concentration; MG = Meghalaya; MH = Maharashtra; NT = Non-typeable; OXA = oxacillin; ST = Sequence Type; TG = Telangana; UA = unassigned; UP = Uttar Pradesh.



Supplementary Figure S1. Pulsed-field gel electrophoresis data and pulsotypes analysis. Description can be found in the Materials and Methods section.