

FIG S1. Maximum likelihood phylogenetic tree generated from 16,097 core genome SNPs differentiating all 188 isolates sequenced in this study (long taxa starting with 'Deli'), plus a set of 44 additional *L. monocytogenes* genomes that span the genetic diversity of the isolates (all other taxa, Table S2). Bootstrap support values are plotted for nodes with > 90% support. Genetic lineages are annotated.

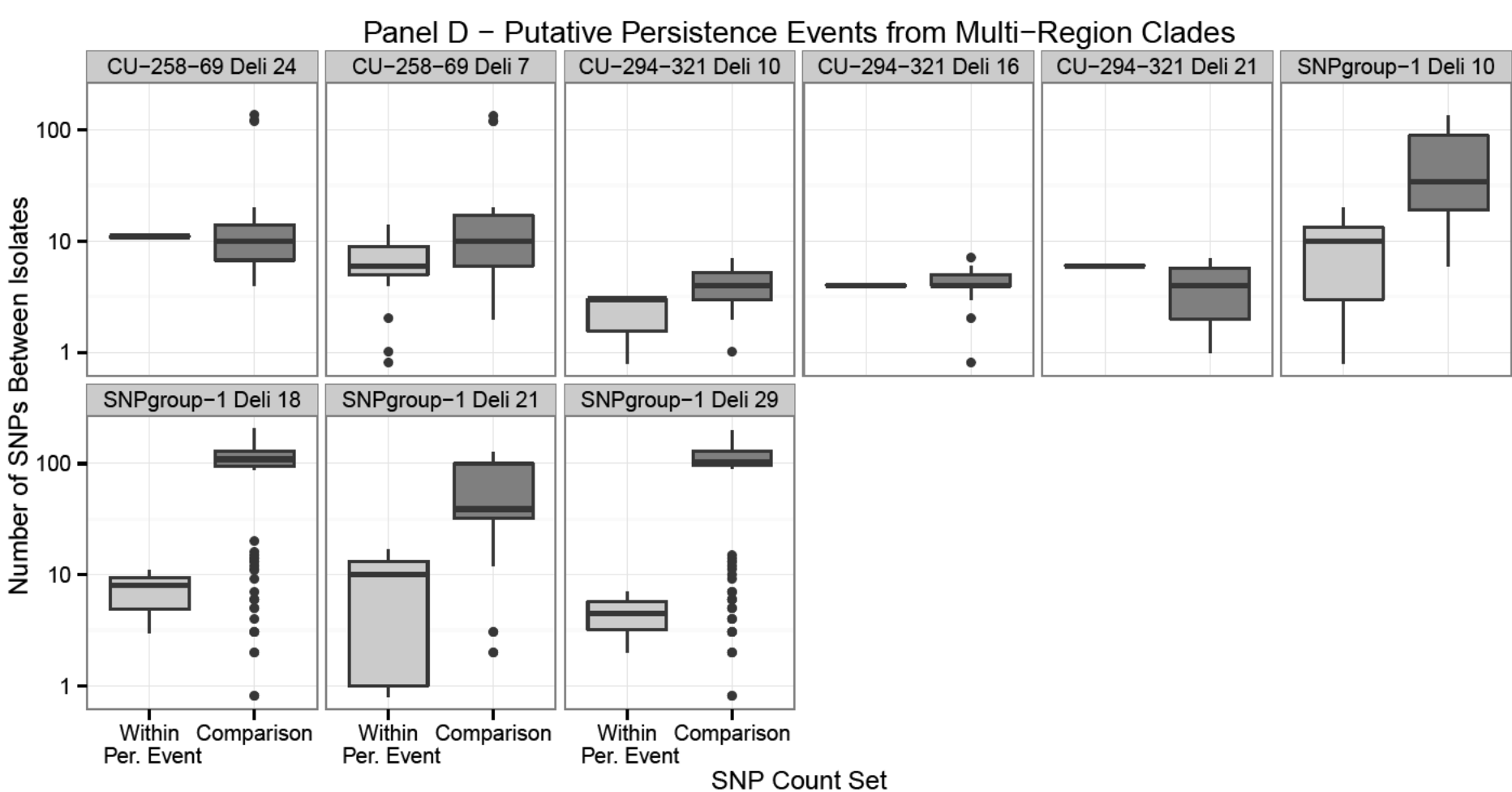
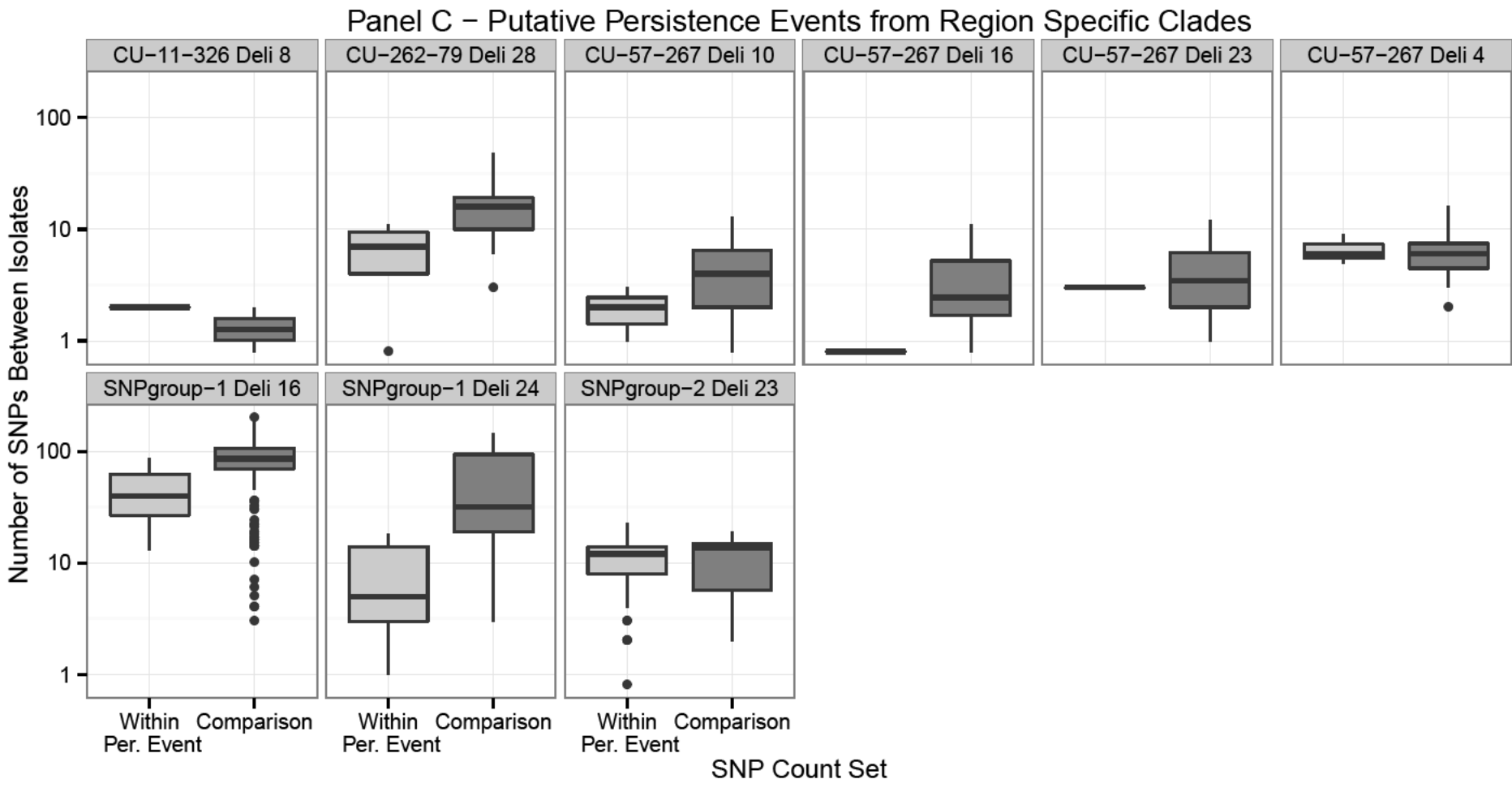
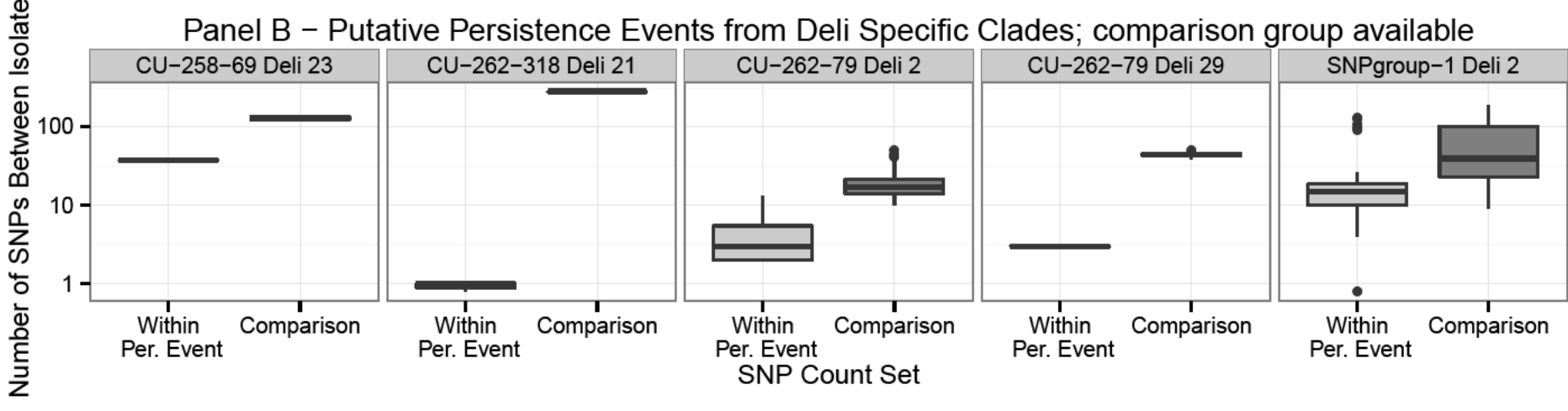
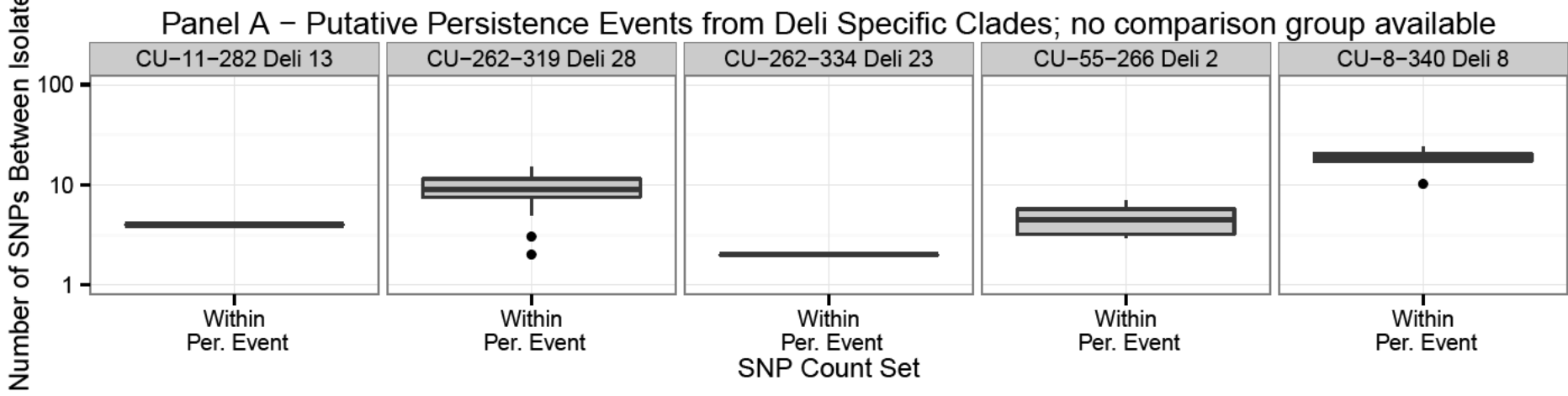


FIG S2. SNP count boxplots to identify persistent strains of *L. monocytogenes* using 14,846 core and accessory genome SNPs among lineage I isolates. Panel A, within persistence event SNP counts for isolates that form a deli specific clade where no comparison isolates of the same subtype are available. Panel B, within persistence event and comparison SNP counts for isolates that form a deli specific clade and comparison isolates are available. Panel C, SNP counts for putative persistence events for isolates that form a state specific clade. Panel D, SNP counts for putative persistence events for isolates that form a multi-state clade. To accommodate a log-scale y-axis, counts of zero SNP differences are plotted just below the 1 SNP difference y-axis minimum. For each box the solid line is the median SNP difference count, box height is the inner quartile range (IQR), whiskers extend to the most extreme value within 1.5\*IQR of the box, and outliers are plotted as points. There are two differences in grouping from the core SNPs boxplots (i) SNP group 3 has been separated into PFGE types CU-262-79 and CU-262-319, and (ii) five strains from SNP group 1 have been excluded as they are outliers from the SNP group 1 phylogenetic clade, see Fig. S3 for details.



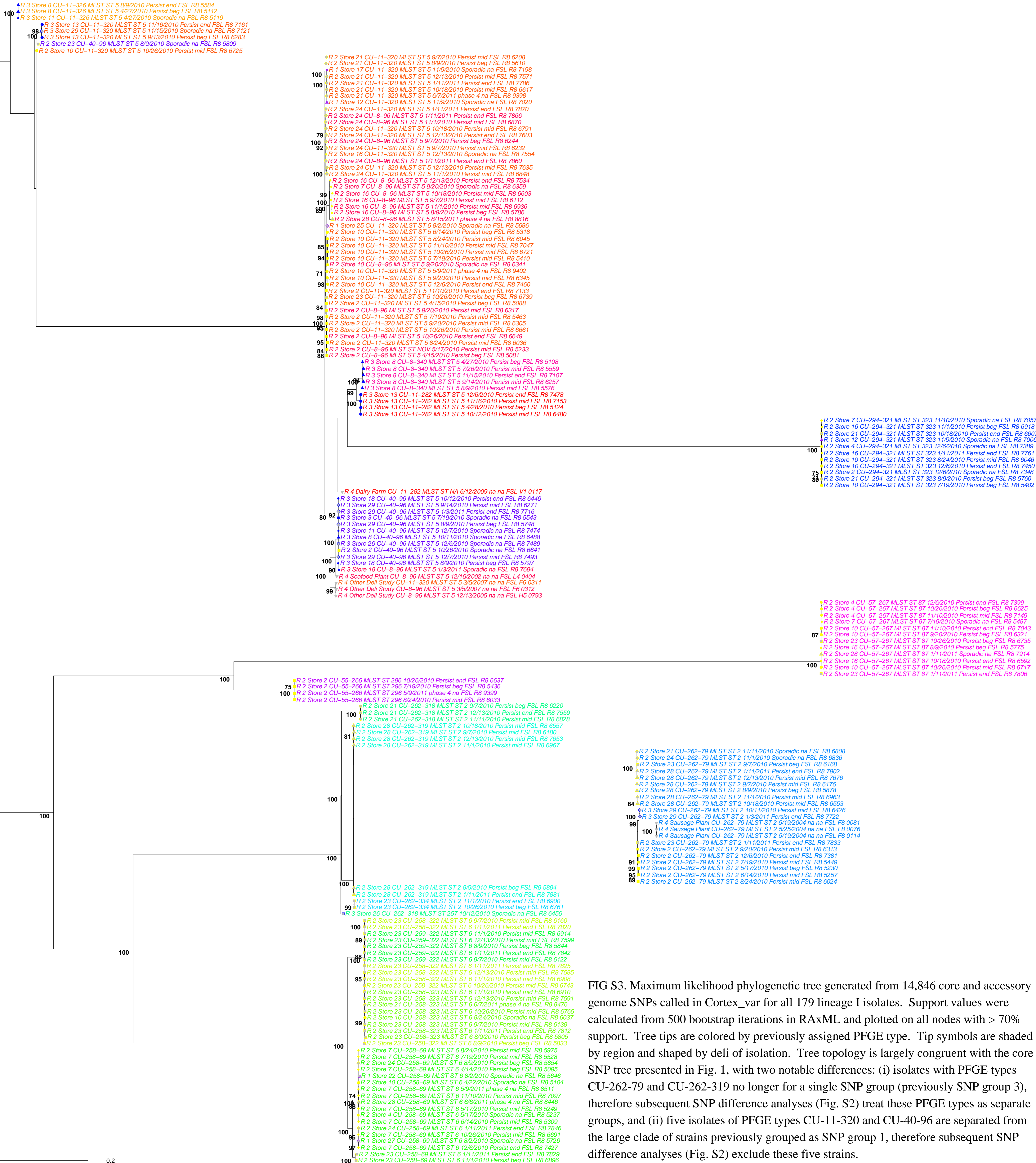


FIG S3. Maximum likelihood phylogenetic tree generated from 14,846 core and accessory genome SNPs called in Cortex\_var for all 179 lineage I isolates. Support values were calculated from 500 bootstrap iterations in RAxML and plotted on all nodes with > 70% support. Tree tips are colored by region and shaped by deli of isolation. Tree topology is largely congruent with the core SNP tree presented in Fig. 1, with two notable differences: (i) isolates with PFGE types CU-262-79 and CU-262-319 no longer for a single SNP group (previously SNP group 3), therefore subsequent SNP difference analyses (Fig. S2) treat these PFGE types as separate groups, and (ii) five isolates of PFGE types CU-11-320 and CU-40-96 are separated from the large clade of strains previously grouped as SNP group 1, therefore subsequent SNP difference analyses (Fig. S2) exclude these five strains.



Table S1. Strains sequence in this study

FSL	Source	Date	Status	Timing	ITEP		PFGE	sigB AT	MLST sequence type (ST) and individual gene allelic types								Ref
					Subset	Lineage			ST	abcZ	bgIA	cat	dapE	dat	ldh	lhkA	
FSL F6-0311	Other deli study*	3/5/2007	na	na	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	(1)
FSL F6-0312	Other deli study	3/5/2007	na	na	FALSE	I	CU-8-96	63	5	2	1	11	3	3	1	7	(1)
FSL F8-0076	Sausage plant	5/25/2004	na	na	FALSE	I	CU-262-79	58	2	1	1	11	11	2	1	5	(2)
FSL F8-0081	Sausage plant	5/19/2004	na	na	FALSE	I	CU-262-79	58	2	1	1	11	11	2	1	5	(2)
FSL F8-0114	Sausage plant	5/19/2004	na	na	FALSE	I	CU-262-79	58	2	1	1	11	11	2	1	5	(2)
FSL H5-0793	Other deli study	12/13/2005	na	na	FALSE	I	CU-8-96	63	5	2	1	11	3	3	1	7	(1)
FSL L3-0257	Seafood plant	4/9/2002	na	na	FALSE	II	CU-182-173	57	635	23	29	3	30	6	6	1	(3)
FSL L4-0396	Seafood plant	12/16/2002	na	na	FALSE	II	CU-182-173	57	635	23	29	3	30	6	6	1	(3)
FSL L4-0404	Seafood plant	12/16/2002	na	na	FALSE	I	CU-8-96	63	5	2	1	11	3	3	1	7	(3)
FSL N3-0993	Dairy farm	5/29/2002	na	na	FALSE	II	CU-11-282	57	364	7	10	8	7	1	26	1	
FSL R8-5081	Store 2	4/15/2010	Persist	beg	TRUE	I	CU-8-96	63	5	2	1	11	3	3	1	7	
FSL R8-5088	Store 2	4/15/2010	Persist	beg	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-5095	Store 7	4/14/2010	Persist	beg	TRUE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-5104	Store 10	4/22/2010	Sporadic	na	TRUE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-5108	Store 8	4/27/2010	Persist	beg	TRUE	I	CU-8-340	63	5	2	1	11	3	3	1	7	
FSL R8-5112	Store 8	4/27/2010	Persist	beg	TRUE	I	CU-11-326	63	5	2	1	11	3	3	1	7	
FSL R8-5119	Store 11	4/27/2010	Sporadic	na	TRUE	I	CU-11-326	63	5	2	1	11	3	3	1	7	
FSL R8-5124	Store 13	4/28/2010	Persist	beg	TRUE	I	CU-11-282	63	5	2	1	11	3	3	1	7	
FSL R8-5230	Store 2	5/17/2010	Persist	beg	TRUE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
FSL R8-5233	Store 2	5/17/2010	Persist	mid	FALSE	I	CU-8-96	63	NOV	2	1	11	3	3*?	1	7	
FSL R8-5237	Store 4	5/17/2010	Sporadic	na	TRUE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-5249	Store 7	5/17/2010	Persist	mid	FALSE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-5257	Store 2	6/14/2010	Persist	mid	FALSE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
FSL R8-5309	Store 7	6/14/2010	Persist	mid	FALSE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-5318	Store 10	6/14/2010	Persist	beg	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-5402	Store 10	7/19/2010	Persist	beg	TRUE	I	CU-294-321	60	323	34	12	11	15	3	1	2	
FSL R8-5410	Store 10	7/19/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-5436	Store 2	7/19/2010	Persist	beg	TRUE	I	CU-55-266	61	296	12	12	12	61	3	1	4	
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FSL R8-5463	Store 2	7/19/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-5487	Store 7	7/19/2010	Sporadic	na	TRUE	I	CU-57-267	61	87	12	1	4	14	3	39	4	
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FSL R8-5543	Store 3	7/19/2010	Sporadic	na	TRUE	I	CU-40-96	63	5	2	1	11	3	3	1	7	
FSL R8-5559	Store 8	7/26/2010	Persist	mid	FALSE	I	CU-8-340	63	5	2	1	11	3	3	1	7	
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FSL R8-5646	Store 22	8/2/2010	Sporadic	na	TRUE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-5686	Store 25	8/2/2010	Sporadic	na	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-5726	Store 27	8/2/2010	Sporadic	na	TRUE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
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FSL R8-5809	Store 23	8/9/2010	Sporadic	na	TRUE	I	CU-40-96	63	5	2	1	11	3	3	1	7	
FSL R8-5833	Store 23	8/9/2010	Persist	beg	TRUE	I	CU-258-322	64	6	3	9	9	3	3	1	5	
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FSL R8-5878	Store 28	8/9/2010	Persist	beg	TRUE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
FSL R8-5884	Store 28	8/9/2010	Persist	beg	TRUE	I	CU-262-319	58	2	1	1	11	11	2	1	5	
FSL R8-5975	Store 7	8/24/2010	Persist	mid	FALSE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
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FSL R8-6033	Store 2	8/24/2010	Persist	mid	TRUE	I	CU-55-266	61	296	12	12	12	61	3	1	4	
FSL R8-6036	Store 2	8/24/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
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FSL R8-6122	Store 23	9/7/2010	Persist	mid	FALSE	I	CU-259-322	64	6	3	9	9	3	3	1	5	
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FSL R8-6138	Store 23	9/7/2010	Persist	mid	TRUE	I	CU-258-323	64	6	3	9	9	3	3	1	5	
FSL R8-6160	Store 23	9/7/2010	Persist	mid	TRUE	I	CU-258-322	64	6	3	9	9	3	3	1	5	
FSL R8-6168	Store 23	9/7/2010	Persist	beg	TRUE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
FSL R8-6176	Store 28	9/7/2010	Persist	mid	TRUE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
FSL R8-6180	Store 28	9/7/2010	Persist	mid	FALSE	I	CU-262-319	58	2	1	1	11	11	2	1	5	

FSL	Source	Date	Status	Timing	ITEP		PFGE	sigB AT	MLST sequence type (ST) and individual gene allelic types							Ref	
					Subset	Lineage			ST	abcZ	bgIA	cat	dapE	dat	ldh		lhkA
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FSL R8-6232	Store 24	9/7/2010	Persist	mid	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-6244	Store 24	9/7/2010	Persist	beg	TRUE	I	CU-8-96	63	5	2	1	11	3	3	1	7	
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FSL R8-6271	Store 29	9/14/2010	Persist	mid	TRUE	I	CU-40-96	63	5	2	1	11	3	3	1	7	
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FSL R8-6553	Store 28	10/18/2010	Persist	mid	FALSE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
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FSL R8-6592	Store 16	10/18/2010	Persist	end	TRUE	I	CU-57-267	61	87	12	1	4	14	3	39	4	
FSL R8-6603	Store 16	10/18/2010	Persist	mid	TRUE	I	CU-8-96	63	5	2	1	11	3	3	1	7	
FSL R8-6607	Store 21	10/18/2010	Persist	end	TRUE	I	CU-294-321	60	323	34	12	11	15	3	1	2	
FSL R8-6617	Store 21	10/18/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-6625	Store 4	10/26/2010	Persist	beg	TRUE	I	CU-57-267	61	87	12	1	4	14	3	39	4	
FSL R8-6637	Store 2	10/26/2010	Persist	end	TRUE	I	CU-55-266	61	296	12	12	12	61	3	1	4	
FSL R8-6641	Store 2	10/26/2010	Sporadic	na	TRUE	I	CU-40-96	63	5	2	1	11	3	3	1	7	
FSL R8-6649	Store 2	10/26/2010	Persist	end	TRUE	I	CU-8-96	63	5	2	1	11	3	3	1	7	
FSL R8-6661	Store 2	10/26/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-6691	Store 7	10/26/2010	Persist	mid	FALSE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-6717	Store 10	10/26/2010	Persist	mid	TRUE	I	CU-57-267	61	87	12	1	4	14	3	39	4	
FSL R8-6721	Store 10	10/26/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-6725	Store 10	10/26/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-6735	Store 23	10/26/2010	Persist	beg	TRUE	I	CU-57-267	61	87	12	1	4	14	3	39	4	
FSL R8-6739	Store 23	10/26/2010	Persist	beg	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-6743	Store 23	10/26/2010	Persist	mid	FALSE	I	CU-258-322	64	6	3	9	9	3	3	1	5	
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FSL R8-6765	Store 23	10/26/2010	Persist	mid	FALSE	I	CU-258-323	64	6	3	9	9	3	3	1	5	
FSL R8-6791	Store 24	10/18/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-6808	Store 21	11/11/2010	Sporadic	na	TRUE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
FSL R8-6828	Store 21	11/11/2010	Persist	mid	TRUE	I	CU-262-318	58	2	1	1	11	11	2	1	5	
FSL R8-6836	Store 24	11/1/2010	Sporadic	na	TRUE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
FSL R8-6848	Store 24	11/1/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-6870	Store 24	11/1/2010	Persist	mid	TRUE	I	CU-8-96	63	5	2	1	11	3	3	1	7	
FSL R8-6892	Store 23	11/1/2010	Persist	end	FALSE	II	CU-296-330	57	9	6	5	6	4	1	4	1	
FSL R8-6896	Store 23	11/1/2010	Persist	beg	TRUE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-6900	Store 23	11/1/2010	Persist	end	TRUE	I	CU-262-334	58	2	1	1	11	11	2	1	5	
FSL R8-6908	Store 23	11/1/2010	Persist	mid	FALSE	I	CU-258-322	64	6	3	9	9	3	3	1	5	
FSL R8-6910	Store 23	11/1/2010	Persist	mid	FALSE	I	CU-258-323	64	6	3	9	9	3	3	1	5	
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FSL R8-6963	Store 28	11/1/2010	Persist	mid	FALSE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
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FSL R8-7020	Store 12	11/9/2010	Sporadic	na	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7043	Store 10	11/10/2010	Persist	end	TRUE	I	CU-57-267	61	87	12	1	4	14	3	39	4	
FSL R8-7047	Store 10	11/10/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3?	1	7	
FSL R8-7057	Store 7	11/10/2010	Sporadic	na	TRUE	I	CU-294-321	60	323	34	12	11	15	3	1	2	
FSL R8-7097	Store 7	11/10/2010	Persist	mid	FALSE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-7107	Store 8	11/15/2010	Persist	end	TRUE	I	CU-8-340	63	5	2	1	11	3	3	1	7	
FSL R8-7121	Store 29	11/15/2010	Sporadic	na	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7133	Store 2	11/10/2010	Persist	end	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7149	Store 4	11/10/2010	Persist	mid	TRUE	I	CU-57-267	61	87	12	1	4	14	3	39	4	
FSL R8-7153	Store 13	11/16/2010	Persist	mid	TRUE	I	CU-11-282	63	5	2	1	11	3	3	1	7	
FSL R8-7161	Store 13	11/16/2010	Persist	end	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7198	Store 17	11/9/2010	Sporadic	na	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7348	Store 2	12/6/2010	Sporadic	na	TRUE	I	CU-294-321	60	323	34	12	11	15	3	1	2	
FSL R8-7381	Store 2	12/6/2010	Persist	end	TRUE	I	CU-262-79	58	2	1	1	11	11	2	1	5	

FSL	Source	Date	Status	Timing	ITEP		PFGE	sigB AT	MLST sequence type (ST) and individual gene allelic types								Ref
					Subset	Lineage			ST	abcZ	bglA	cat	dapE	dat	ldh	lhkA	
FSL R8-7389	Store 4	12/6/2010	Sporadic	na	TRUE	I	CU-294-321	60	323	34	12	11	15	3	1	2	
FSL R8-7399	Store 4	12/6/2010	Persist	end	TRUE	I	CU-57-267	61	87	12	1	4	14	3	39	4	
FSL R8-7427	Store 7	12/6/2010	Persist	end	TRUE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-7450	Store 10	12/6/2010	Persist	end	TRUE	I	CU-294-321	60	323	34	12	11	15	3	1	2	
FSL R8-7460	Store 10	12/6/2010	Persist	end	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7474	Store 11	12/7/2010	Sporadic	na	TRUE	I	CU-40-96	63	5	2	1	11	3	3	1	7	
FSL R8-7478	Store 13	12/6/2010	Persist	end	TRUE	I	CU-11-282	63	5	2	1	11	3	3	1	7	
FSL R8-7489	Store 26	12/6/2010	Sporadic	na	TRUE	I	CU-40-96	63	5	2	1	11	3	3	1	7	
FSL R8-7493	Store 29	12/7/2010	Persist	mid	TRUE	I	CU-40-96	63	5	2	1	11	3	3	1	7	
FSL R8-7534	Store 16	12/13/2010	Persist	end	TRUE	I	CU-8-96	63	5	2	1	11	3	3	1	7	
FSL R8-7554	Store 16	12/13/2010	Sporadic	na	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7559	Store 21	12/13/2010	Persist	end	TRUE	I	CU-262-318	58	2	1	1	11	11	2	1	5	
FSL R8-7571	Store 21	12/13/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7585	Store 23	12/13/2010	Persist	mid	FALSE	I	CU-258-322	64	6	3	9	9	3	3?	1	5	
FSL R8-7591	Store 23	12/13/2010	Persist	mid	FALSE	I	CU-258-323	64	6	3	9	9	3	3	1	5	
FSL R8-7599	Store 23	12/13/2010	Persist	mid	TRUE	I	CU-259-322	64	6	3	9	9	3	3	1	5	
FSL R8-7603	Store 24	12/13/2010	Persist	end	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7635	Store 24	12/13/2010	Persist	mid	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7653	Store 28	12/13/2010	Persist	mid	TRUE	I	CU-262-319	58	2	1	1	11	11	2	1	5	
FSL R8-7676	Store 28	12/13/2010	Persist	mid	FALSE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
FSL R8-7694	Store 18	1/3/2011	Sporadic	na	TRUE	I	CU-8-96	63	5	2	1	11	3	3	1	7	
FSL R8-7716	Store 29	1/3/2011	Persist	end	TRUE	I	CU-40-96	63	5	2	1	11	3	3	1	7	
FSL R8-7722	Store 29	1/3/2011	Persist	end	TRUE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
FSL R8-7761	Store 16	1/11/2011	Persist	end	TRUE	I	CU-294-321	60	323	34	12	11	15	3	1	2	
FSL R8-7786	Store 21	1/11/2011	Persist	end	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7806	Store 23	1/11/2011	Persist	end	TRUE	I	CU-57-267	61	87	12	1	4	14	3	39	4	
FSL R8-7812	Store 23	1/11/2011	Persist	end	TRUE	I	CU-258-323	64	6	3	9	9	3	3	1	5	
FSL R8-7820	Store 23	1/11/2011	Persist	end	TRUE	I	CU-258-322	64	6	3	9	9	3	3	1	5	
FSL R8-7825	Store 23	1/11/2011	Persist	end	TRUE	I	CU-258-322	64	6	3	9	9	3	3	1	5	
FSL R8-7829	Store 23	1/11/2011	Persist	end	TRUE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-7833	Store 23	1/11/2011	Persist	end	TRUE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
FSL R8-7842	Store 23	1/11/2011	Persist	end	TRUE	I	CU-259-322	64	6	3	9	9	3	3	1	5	
FSL R8-7846	Store 24	1/11/2011	Persist	end	TRUE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-7860	Store 24	1/11/2011	Persist	end	TRUE	I	CU-8-96	63	5	2	1	11	3	3	1	7	
FSL R8-7866	Store 24	1/11/2011	Persist	na	FALSE	I	CU-8-96	63	5	2	1	11	3	3	1	7	
FSL R8-7870	Store 24	1/11/2011	Persist	end	TRUE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-7881	Store 28	1/11/2011	Persist	end	TRUE	I	CU-262-319	58	2	1	1	11	11	2	1	5	
FSL R8-7902	Store 28	1/11/2011	Persist	end	TRUE	I	CU-262-79	58	2	1	1	11	11	2	1	5	
FSL R8-7914	Store 28	1/11/2011	Sporadic	na	TRUE	I	CU-57-267	61	87	12	1	4	14	3	39	4	
FSL R8-7926	Store 19	1/11/2011	Persist	end	FALSE	II	CU-182-173	57	635	23	29	3	30	6	6	1	
FSL R8-8446	Store 28	6/6/2011	phase 4	na	FALSE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-8476	Store 21	6/7/2011	phase 4	na	FALSE	I	CU-258-323	64	6	3	9	9	3	3	1	5	
FSL R8-8511	Store 7	5/9/2011	phase 4	na	FALSE	I	CU-258-69	64	6	3	9	9	3	3	1	5	
FSL R8-8816	Store 28	8/15/2011	phase 4	na	FALSE	I	CU-8-96	63	5	2	1	11	3	3	1	7	
FSL R8-9398	Store 21	6/7/2011	phase 4	na	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL R8-9399	Store 2	5/9/2011	phase 4	na	FALSE	I	CU-55-266	61	296	12	12	12	61	3?	1	4	
FSL R8-9402	Store 10	5/9/2011	phase 4	na	FALSE	I	CU-11-320	63	5	2	1	11	3	3	1	7	
FSL T1-0023	Seafood plant	3/1/2001	na	na	FALSE	II	CU-182-173	57	635	23	29	3	30	6	6	1	(4)
FSL T1-0946	Seafood plant	11/1/2001	na	na	FALSE	II	CU-182-173	57	635	23	29	3	30	6	6	1	(4)
FSL V1-0009	Seafood plant	10/28/2008	na	na	FALSE	II	CU-182-173	57	635	23	29	3	30	6	6	1	(5)
FSL V1-0117	Dairy farm	6/12/2009	na	na	FALSE	I	CU-11-282	63	insufficient data								(5)

\*Any isolate with a source not listed as "Store ###" was selected from comparison studies referenced in the last column and listed below.

Grey text isolate sequence data were later excluded from the study due to inconsistencies with previously reported molecular subtyping which suggest an incorrect isolate may have been sequenced

- (1) Sauders B. D., Sanchez M. D., Rice D. H., Corby J., Stich S., Fortes E. D., Roof S. E., Wiedmann M. 2009. Prevalence and molecular diversity of *Listeria monocytogenes* in retail establishments. *J. Food Prot.* 72:2337-2349.
- (2) Ferreira V., Barbosa J., Stasiewicz M., Vongkamjan K., Moreno Switt A., Hogg T., Gibbs P., Teixeira P., Wiedmann M. 2011. Diverse geno- and phenotypes of persistent *Listeria monocytogenes* isolates from fermented meat sausage production facilities in Portugal. *Appl. Environ. Microbiol.* 77:2701-2715.
- (3) Lappi V. R., Thimothe J., Nightingale K. K., Gall K., Scott V. N., Wiedmann M. 2004. Longitudinal studies on *Listeria* in smoked fish plants: impact of intervention strategies on contamination patterns. *J. Food Prot.* 67:2500-2514.
- (4) Thimothe J., Nightingale K. K., Gall K., Scott V. N., Wiedmann M. 2004. Tracking of *Listeria monocytogenes* in Smoked Fish Processing Plants. *J. Food Prot.* 67:328-341.
- (5) Vongkamjan K., Roof S., Stasiewicz M. J., Wiedmann M. 2013. Persistent *Listeria monocytogenes* subtypes isolated from a smoked fish processing facility included both phage susceptible and resistant isolates. *Food Microbiology.* 35:38-48.

Table S2 - Genome Sequence and Assembly Metrics

FSL	Sequence Read File Sizes			Reference Mapping	De Novo Assembled, Filtered Contigs [ $>1X$ k-mer coverage, $>500$ bp]				GenBank Accessions for BioProject PRJNA245909			
	Raw reads [Mb]	Trimmed, Paired End reads [Mb]	Percent Loss	Average bp coverage via mapping to J1776	Number of contigs	Total size of contigs	Median contig size	N50 contig length	BioSample	SRA	WGS version	
	Max	1570.6	743.3	-24%	359.0	456.0	3.14E+06	156,963	5.56E+05			
	Mean	461.5	212.7	-50%	99.7	32.5	3.06E+06	29,624	3.82E+05			
	<b>Median</b>	<b>439.3</b>	<b>200.7</b>	<b>-45%</b>	<b>93.6</b>	<b>26.0</b>	<b>3.09E+06</b>	<b>21,100</b>	<b>4.49E+05</b>			
	Min	44.9	16.8	-73%	8.0	12.0	2.88E+06	1,778	1.14E+04			
FSL_F6_0311	695.3	237.0	-66%	115.92	17	3.09E+06	36,481	5.46E+05	SAMN02741455	SRR1269954	JOKS01000000	
FSL_F6_0312	184.7	140.4	-24%	65.66	21	3.13E+06	17,648	5.08E+05	SAMN02741456	SRR1269955	JOWB01000000	
FSL_F8_0076	677.5	245.5	-64%	123.45	25	3.00E+06	35,860	3.32E+05	SAMN02741457	SRR1269956	JOWC01000000	
FSL_F8_0081	789.0	289.0	-63%	144.32	24	3.00E+06	42,749	3.32E+05	SAMN02741458	SRR1269957	JOWD01000000	
FSL_F8_0114	528.3	189.1	-64%	93.68	28	3.00E+06	16,978	3.31E+05	SAMN02741459	SRR1269958	JOWE01000000	
FSL_H5_0793	333.8	242.7	-27%	117.95	24	3.12E+06	23,454	5.08E+05	SAMN02741460	SRR1269959	JOWF01000000	
FSL_L3_0257	303.1	222.7	-27%	107.58	17	3.07E+06	49,052	5.35E+05	SAMN02741461	SRR1269960	JOWG01000000	
FSL_L4_0396	300.4	214.5	-29%	107.41	19	3.07E+06	22,765	5.35E+05	SAMN02741462	SRR1269961	JOWH01000000	
FSL_L4_0404	259.2	190.6	-26%	93.22	28	3.11E+06	8,824	5.08E+05	SAMN02741463	SRR1269962	JOWI01000000	
FSL_R8_5081	382.1	247.2	-35%	111.09	22	3.13E+06	32,606	4.49E+05	SAMN02741465	SRR1269964	JOWK01000000	
FSL_R8_5088	405.2	270.0	-33%	123.52	20	3.09E+06	17,183	5.08E+05	SAMN02741466	SRR1269965	JOWL01000000	
FSL_R8_5095	349.8	224.8	-36%	103.41	30	3.10E+06	16,522	2.55E+05	SAMN02741467	SRR1269966	JOWM01000000	
FSL_R8_5104	176.4	106.8	-39%	47.43	30	3.04E+06	37,886	2.58E+05	SAMN02741468	SRR1269967	JOWN01000000	
FSL_R8_5108	152.2	90.4	-41%	39.63	41	3.10E+06	13,075	2.61E+05	SAMN02741469	SRR1269968	JOWO01000000	
FSL_R8_5112	208.8	128.5	-38%	57.70	34	3.04E+06	29,390	2.60E+05	SAMN02741470	SRR1269969	JOWP01000000	
FSL_R8_5119	844.4	261.0	-69%	118.75	24	3.05E+06	48,384	2.83E+05	SAMN02741471	SRR1269970	JOWQ01000000	
FSL_R8_5124	964.6	297.0	-69%	136.17	32	3.06E+06	5,756	4.83E+05	SAMN02741472	SRR1269971	JOWR01000000	
FSL_R8_5230	416.1	272.9	-34%	125.32	40	3.06E+06	35,487	1.59E+05	SAMN02741473	SRR1269972	JOWS01000000	
FSL_R8_5233	424.7	236.1	-44%	109.30	87	3.12E+06	13,887	8.28E+04	SAMN02741474	SRR1269973	JOWT01000000	
FSL_R8_5237	152.6	76.9	-50%	34.92	55	3.09E+06	27,638	1.20E+05	SAMN02741475	SRR1269974	JOWU01000000	
FSL_R8_5249	327.3	205.8	-37%	92.30	28	3.10E+06	8,724	4.05E+05	SAMN02741476	SRR1269975	JOWV01000000	
FSL_R8_5257	306.5	187.4	-39%	84.54	31	3.06E+06	37,449	2.55E+05	SAMN02741477	SRR1269976	JOJS01000000	
FSL_R8_5309	278.4	179.9	-35%	82.45	25	3.10E+06	11,933	3.21E+05	SAMN02741478	SRR1269977	JOWW01000000	
FSL_R8_5318	493.9	156.3	-68%	71.56	29	3.09E+06	47,392	2.26E+05	SAMN02741479	SRR1269978	JOWX01000000	
FSL_R8_5402	709.7	234.7	-67%	111.28	20	2.95E+06	37,729	2.94E+05	SAMN02741480	SRR1269979	JOWY01000000	
FSL_R8_5410	412.9	268.2	-35%	122.29	26	3.09E+06	24,237	4.83E+05	SAMN02741481	SRR1269980	JOWZ01000000	
FSL_R8_5436	456.1	309.5	-32%	142.34	23	3.03E+06	39,702	3.54E+05	SAMN02741482	SRR1269981	JOXA01000000	
FSL_R8_5449	548.6	356.0	-35%	163.42	30	3.06E+06	42,036	2.56E+05	SAMN02741483	SRR1269982	JOXB01000000	
FSL_R8_5463	373.0	231.4	-38%	103.08	22	3.09E+06	17,211	4.82E+05	SAMN02741484	SRR1269932	JOXC01000000	
FSL_R8_5487	1182.2	743.3	-37%	358.98	16	2.89E+06	97,980	3.56E+05	SAMN02741485	SRR1269933	JOXD01000000	
FSL_R8_5543	667.8	212.7	-68%	97.64	23	3.06E+06	21,100	4.81E+05	SAMN02741487	SRR1269935	JOXE01000000	
FSL_R8_5559	644.6	199.7	-69%	88.28	47	3.11E+06	3,237	4.85E+05	SAMN02741488	SRR1269936	JOXF01000000	
FSL_R8_5576	302.3	194.5	-36%	85.31	47	3.11E+06	3,237	4.85E+05	SAMN02741489	SRR1269937	JOXG01000000	
FSL_R8_5584	410.6	275.2	-33%	124.88	22	3.05E+06	29,390	4.85E+05	SAMN02741490	SRR1269938	JOXH01000000	
FSL_R8_5610	703.3	449.2	-36%	207.30	21	3.10E+06	24,237	4.83E+05	SAMN02741491	SRR1269939	JOXI01000000	
FSL_R8_5646	423.6	253.5	-40%	114.36	21	3.10E+06	8,724	5.15E+05	SAMN02741492	SRR1269940	JOXJ01000000	
FSL_R8_5686	561.4	352.2	-37%	159.39	20	3.09E+06	24,237	5.08E+05	SAMN02741493	SRR1269941	JOXK01000000	
FSL_R8_5726	734.1	447.2	-39%	208.54	23	3.10E+06	6,494	5.15E+05	SAMN02741494	SRR1269942	JOXL01000000	
FSL_R8_5748	753.9	250.6	-67%	114.14	24	3.06E+06	21,100	3.00E+05	SAMN02741496	SRR1269944	JOXN01000000	
FSL_R8_5760	369.8	241.4	-35%	114.13	16	2.95E+06	97,984	4.81E+05	SAMN02741497	SRR1269945	JOXO01000000	
FSL_R8_5775	460.5	315.5	-31%	151.96	17	2.89E+06	8,857	3.56E+05	SAMN02741498	SRR1269946	JOXP01000000	
FSL_R8_5786	526.3	332.7	-37%	151.50	28	3.12E+06	17,211	5.08E+05	SAMN02741499	SRR1269947	JOXQ01000000	
FSL_R8_5797	530.0	331.5	-37%	149.96	19	3.06E+06	6,516	5.13E+05	SAMN02741500	SRR1269948	JOXR01000000	
FSL_R8_5805	749.0	474.2	-37%	209.70	27	3.11E+06	6,375	5.16E+05	SAMN02741501	SRR1269949	JOXS01000000	
FSL_R8_5809	224.9	135.1	-40%	61.29	22	3.11E+06	17,200	4.83E+05	SAMN02741502	SRR1269950	JOXT01000000	
FSL_R8_5833	815.5	259.1	-68%	114.73	35	3.14E+06	9,221	4.91E+05	SAMN02741503	SRR1269951	JOXU01000000	
FSL_R8_5844	728.6	240.4	-67%	107.25	30	3.11E+06	6,375	5.16E+05	SAMN02741504	SRR1269952	JOXV01000000	
FSL_R8_5854	455.1	307.3	-32%	139.80	22	3.10E+06	14,745	5.15E+05	SAMN02741505	SRR1269953	JOXW01000000	
FSL_R8_5878	497.2	320.7	-35%	148.33	30	3.06E+06	35,487	2.73E+05	SAMN02741507	SRR1270020	JOXY01000000	
FSL_R8_5884	382.8	233.7	-39%	104.44	30	3.11E+06	42,036	2.73E+05	SAMN02741508	SRR1270021	JOXZ01000000	
FSL_R8_5975	450.1	278.0	-38%	126.89	23	3.10E+06	6,494	5.15E+05	SAMN02741509	SRR1270022	JOYA01000000	
FSL_R8_6024	1471.6	552.5	-62%	253.38	29	3.06E+06	42,749	2.56E+05	SAMN02741510	SRR1269915	JOYB01000000	

FSL	Sequence Read File Sizes			Reference Mapping	De Novo Assembled, Filtered Contigs [ $>1X$ k-mer coverage, $>500$ bp]				GenBank Accessions for BioProject PRJNA245909		
	Raw reads [Mb]	Trimmed, Paired End reads [Mb]	Percent Loss	Average bp coverage via mapping to J1776	Number of contigs	Total size of contigs	Median contig size	N50 contig length	BioSample	SRA	WGS version
FSL_R8_6033	752.1	242.0	-68%	111.15	26	3.03E+06	49,696	3.41E+05	SAMN02741511	SRR1269916	JOYC01000000
FSL_R8_6036	673.7	224.1	-67%	99.92	20	3.09E+06	3,295	5.21E+05	SAMN02741512	SRR1269917	JOYD01000000
FSL_R8_6037	330.5	211.6	-36%	92.77	29	3.11E+06	3,885	5.16E+05	SAMN02741513	SRR1269918	JOYE01000000
FSL_R8_6045	657.0	435.4	-34%	199.39	18	3.10E+06	17,211	5.21E+05	SAMN02741514	SRR1269919	JOYF01000000
FSL_R8_6046	460.9	291.1	-37%	138.28	18	2.95E+06	97,984	4.81E+05	SAMN02741515	SRR1269920	JOYG01000000
FSL_R8_6112	918.2	594.3	-35%	261.51	27	3.13E+06	3,295	5.08E+05	SAMN02741516	SRR1269921	JOYH01000000
FSL_R8_6122	542.8	336.6	-38%	148.50	27	2.88E+06	6,122	5.16E+05	SAMN02741517	SRR1269922	JOYI01000000
FSL_R8_6134	717.9	243.6	-66%	109.31	19	3.02E+06	64,240	5.04E+05	SAMN02741518	SRR1269923	JOYJ01000000
FSL_R8_6138	712.0	228.7	-68%	102.06	33	3.11E+06	5,108	4.80E+05	SAMN02741519	SRR1269924	JOYK01000000
FSL_R8_6160	638.7	211.2	-67%	93.41	40	3.14E+06	3,993	5.10E+05	SAMN02741520	SRR1269925	JOYL01000000
FSL_R8_6168	273.8	168.9	-38%	77.72	29	3.01E+06	35,487	2.73E+05	SAMN02741521	SRR1269926	JOYM01000000
FSL_R8_6176	305.7	201.6	-34%	91.70	32	3.06E+06	35,487	2.73E+05	SAMN02741522	SRR1269927	JOYN01000000
FSL_R8_6180	519.5	324.9	-37%	148.44	29	3.11E+06	35,487	2.73E+05	SAMN02741523	SRR1269928	JOYO01000000
FSL_R8_6208	646.2	403.2	-38%	180.48	18	3.10E+06	17,211	5.21E+05	SAMN02741524	SRR1269929	JOYP01000000
FSL_R8_6220	677.0	441.2	-35%	196.98	24	3.10E+06	42,749	3.32E+05	SAMN02741525	SRR1269930	JOYQ01000000
FSL_R8_6232	1570.6	520.7	-67%	233.38	18	3.10E+06	17,211	5.21E+05	SAMN02741526	SRR1269931	JOYR01000000
FSL_R8_6244	994.2	324.2	-67%	145.27	20	3.13E+06	53,770	4.49E+05	SAMN02741527	SRR1269992	JOYS01000000
FSL_R8_6257	857.7	291.6	-66%	127.35	44	3.10E+06	3,928	4.85E+05	SAMN02741528	SRR1269993	JOYT01000000
FSL_R8_6271	397.5	247.7	-38%	113.90	26	3.06E+06	73,237	3.23E+05	SAMN02741529	SRR1269994	JOYU01000000
FSL_R8_6283	346.5	231.0	-33%	100.60	21	3.12E+06	9,206	5.19E+05	SAMN02741530	SRR1269995	JOYV01000000
FSL_R8_6305	605.9	377.7	-38%	175.56	23	3.09E+06	29,914	4.83E+05	SAMN02741531	SRR1269996	JOYW01000000
FSL_R8_6313	363.0	231.9	-36%	105.53	30	3.06E+06	35,487	2.56E+05	SAMN02741532	SRR1269997	JOYX01000000
FSL_R8_6317	629.1	308.7	-51%	140.98	22	3.13E+06	24,509	5.08E+05	SAMN02741533	SRR1269998	JOYY01000000
FSL_R8_6321	1058.6	320.7	-70%	155.94	16	2.89E+06	97,980	3.56E+05	SAMN02741534	SRR1269999	JOYZ01000000
FSL_R8_6341	726.5	196.9	-73%	90.03	31	3.12E+06	3,295	5.08E+05	SAMN02741535	SRR1270000	JOZA01000000
FSL_R8_6345	542.4	169.8	-69%	77.19	22	3.09E+06	29,914	4.83E+05	SAMN02741536	SRR1270001	JOZB01000000
FSL_R8_6359	221.9	136.2	-39%	60.88	31	3.12E+06	17,173	2.68E+05	SAMN02741537	SRR1270002	JOZC01000000
FSL_R8_6373	301.5	193.0	-36%	87.57	23	3.07E+06	11,083	5.04E+05	SAMN02741538	SRR1270003	JOZD01000000
FSL_R8_6426	362.0	226.7	-37%	104.83	29	3.06E+06	35,672	2.73E+05	SAMN02741539	SRR1270004	JOZE01000000
FSL_R8_6446	503.0	318.6	-37%	142.65	20	3.06E+06	17,201	5.13E+05	SAMN02741540	SRR1270005	JOZF01000000
FSL_R8_6456	85.4	34.7	-59%	15.87	137	2.99E+06	11,905	4.23E+04	SAMN02741541	SRR1270006	JOZG01000000
FSL_R8_6480	1090.5	365.8	-66%	167.03	29	3.06E+06	9,205	4.83E+05	SAMN02741542	SRR1270007	JOZH01000000
FSL_R8_6488	615.0	198.9	-68%	91.37	23	3.06E+06	6,516	5.08E+05	SAMN02741543	SRR1270008	JOZI01000000
FSL_R8_6553	573.2	176.7	-69%	81.42	28	3.01E+06	35,487	2.73E+05	SAMN02741544	SRR1270009	JOZJ01000000
FSL_R8_6557	416.3	275.1	-34%	123.86	28	3.11E+06	42,749	2.73E+05	SAMN02741545	SRR1270010	JOZK01000000
FSL_R8_6592	260.5	173.5	-33%	82.58	17	2.89E+06	6,728	3.56E+05	SAMN02741546	SRR1270011	JOZL01000000
FSL_R8_6603	376.7	249.2	-34%	111.69	31	3.12E+06	4,185	4.51E+05	SAMN02741547	SRR1270012	JOZM01000000
FSL_R8_6607	339.5	220.4	-35%	102.56	19	2.95E+06	6,757	4.80E+05	SAMN02741548	SRR1270013	JOZN01000000
FSL_R8_6617	330.3	220.8	-33%	97.48	12	3.06E+06	152,843	5.56E+05	SAMN02741549	SRR1270014	JOZO01000000
FSL_R8_6625	622.8	203.8	-67%	98.35	16	2.89E+06	98,006	3.56E+05	SAMN02741550	SRR1270015	JOZP01000000
FSL_R8_6637	459.4	143.4	-69%	65.42	24	3.03E+06	28,795	3.54E+05	SAMN02741551	SRR1270016	JOZQ01000000
FSL_R8_6641	709.1	242.0	-66%	111.98	14	3.01E+06	152,851	5.13E+05	SAMN02741552	SRR1270017	JOZR01000000
FSL_R8_6649	208.5	126.3	-39%	56.66	23	3.13E+06	24,426	4.83E+05	SAMN02741553	SRR1270018	JOZS01000000
FSL_R8_6661	404.1	280.4	-31%	126.45	23	3.10E+06	3,948	5.21E+05	SAMN02741554	SRR1270028	JOZT01000000
FSL_R8_6691	283.3	183.7	-35%	82.66	34	3.10E+06	8,910	2.87E+05	SAMN02741555	SRR1270029	JOZU01000000
FSL_R8_6717	310.5	203.4	-35%	95.92	17	2.89E+06	41,530	3.56E+05	SAMN02741556	SRR1270030	JOZV01000000
FSL_R8_6721	167.8	105.1	-37%	47.55	31	3.09E+06	17,211	2.88E+05	SAMN02741557	SRR1270031	JOZW01000000
FSL_R8_6725	502.2	162.3	-68%	73.62	23	3.10E+06	6,452	5.08E+05	SAMN02741558	SRR1270032	JOZX01000000
FSL_R8_6735	716.3	235.9	-67%	114.61	16	2.89E+06	98,006	3.56E+05	SAMN02741559	SRR1270033	JOZY01000000
FSL_R8_6739	770.4	257.7	-67%	116.21	23	3.09E+06	29,914	4.83E+05	SAMN02741560	SRR1270112	JOZZ01000000
FSL_R8_6743	749.7	274.9	-63%	128.28	37	3.14E+06	7,101	5.15E+05	SAMN02741561	SRR1270034	JPAA01000000
FSL_R8_6761	727.0	254.5	-65%	123.47	38	3.13E+06	17,763	2.73E+05	SAMN02741562	SRR1270035	JPAB01000000
FSL_R8_6765	384.2	137.4	-64%	65.70	37	3.11E+06	4,113	3.24E+05	SAMN02741563	SRR1270036	JPAC01000000
FSL_R8_6791	395.8	138.1	-65%	65.66	22	3.09E+06	26,092	5.08E+05	SAMN02741564	SRR1270037	JPAD01000000
FSL_R8_6808	749.5	266.2	-64%	134.11	29	3.06E+06	35,487	2.73E+05	SAMN02741565	SRR1270038	JPAE01000000
FSL_R8_6828	258.7	191.1	-26%	91.08	24	3.10E+06	29,858	3.32E+05	SAMN02741566	SRR1270039	JPAF01000000
FSL_R8_6836	228.8	164.9	-28%	82.33	28	3.06E+06	42,749	2.73E+05	SAMN02741567	SRR1269983	JPAG01000000



FSL	Sequence Read File Sizes			Reference Mapping	De Novo Assembled, Filtered Contigs [ $>1X$ k-mer coverage, $>500$ bp]				GenBank Accessions for BioProject PRJNA245909		
	Raw reads [Mb]	Trimmed, Paired End reads [Mb]	Percent Loss	Average bp coverage via mapping to J1776	Number of contigs	Total size of contigs	Median contig size	N50 contig length	BioSample	SRA	WGS version
FSL_R8_6848	248.6	164.4	-34%	79.77	19	3.10E+06	31,496	5.04E+05	SAMN02741568	SRR1269984	JPAH01000000
FSL_R8_6870	548.8	193.8	-65%	93.96	22	3.13E+06	53,770	4.84E+05	SAMN02741569	SRR1269985	JPAI01000000
FSL_R8_6892	379.3	134.4	-65%	67.06	34	3.02E+06	37,316	2.78E+05	SAMN02741570	SRR1269986	JPAJ01000000
FSL_R8_6896	555.7	190.9	-66%	93.55	30	3.11E+06	6,962	3.45E+05	SAMN02741571	SRR1269987	JPAK01000000
FSL_R8_6900	428.6	147.9	-65%	70.59	43	3.13E+06	21,711	2.25E+05	SAMN02741572	SRR1269988	JPAL01000000
FSL_R8_6908	456.0	157.9	-65%	74.08	53	3.14E+06	3,214	2.57E+05	SAMN02741573	SRR1269989	JPAM01000000
FSL_R8_6910	139.3	93.8	-33%	45.68	43	3.10E+06	6,375	2.55E+05	SAMN02741574	SRR1269990	JPAN01000000
FSL_R8_6914	138.9	92.3	-33%	44.51	51	3.10E+06	10,934	1.86E+05	SAMN02741575	SRR1269991	JPAO01000000
FSL_R8_6918	158.5	98.0	-38%	50.66	27	2.95E+06	97,947	1.79E+05	SAMN02741576	SRR1269895	JPAP01000000
FSL_R8_6936	468.7	168.1	-64%	80.00	30	3.13E+06	1,778	5.08E+05	SAMN02741577	SRR1269896	JPAQ01000000
FSL_R8_6963	472.0	163.9	-65%	81.99	32	3.06E+06	35,487	2.56E+05	SAMN02741578	SRR1269897	JPAR01000000
FSL_R8_6967	488.4	181.1	-63%	87.85	29	3.11E+06	42,036	2.73E+05	SAMN02741579	SRR1269898	JPAS01000000
FSL_R8_7006	157.2	54.4	-65%	26.97	49	2.95E+06	39,242	1.20E+05	SAMN02741580	SRR1269899	JPAT01000000
FSL_R8_7020	479.2	169.1	-65%	83.49	18	3.10E+06	17,183	5.21E+05	SAMN02741581	SRR1269900	JPAU01000000
FSL_R8_7043	187.6	133.9	-29%	69.90	18	2.89E+06	98,002	3.09E+05	SAMN02741582	SRR1269901	JPAV01000000
FSL_R8_7047	48.7	29.9	-39%	14.78	101	3.08E+06	16,706	5.73E+04	SAMN02741583	SRR1269902	JPAW01000000
FSL_R8_7057	303.0	203.2	-33%	105.62	18	2.95E+06	97,984	4.81E+05	SAMN02741584	SRR1269903	JPAX01000000
FSL_R8_7097	524.1	177.4	-66%	80.28	32	3.11E+06	3,579	5.15E+05	SAMN02741585	SRR1269904	JPAY01000000
FSL_R8_7107	534.7	173.9	-67%	84.37	48	3.11E+06	2,903	4.84E+05	SAMN02741586	SRR1269905	JPAZ01000000
FSL_R8_7121	324.8	119.9	-63%	56.97	26	3.12E+06	9,206	5.08E+05	SAMN02741587	SRR1269906	JPBA01000000
FSL_R8_7133	460.9	165.2	-64%	79.28	25	3.10E+06	17,211	4.45E+05	SAMN02741588	SRR1269907	JPBB01000000
FSL_R8_7149	396.1	136.4	-66%	71.11	19	2.89E+06	8,857	3.56E+05	SAMN02741589	SRR1269908	JPBC01000000
FSL_R8_7153	253.0	185.7	-27%	91.75	31	3.06E+06	5,756	3.03E+05	SAMN02741590	SRR1269909	JPBD01000000
FSL_R8_7161	215.8	152.3	-29%	71.90	25	3.12E+06	9,206	4.63E+05	SAMN02741591	SRR1269910	JPBE01000000
FSL_R8_7198	514.0	345.7	-33%	173.24	18	3.10E+06	17,211	5.21E+05	SAMN02741592	SRR1269911	JPBF01000000
FSL_R8_7348	485.3	169.0	-65%	82.91	18	2.95E+06	97,984	4.81E+05	SAMN02741593	SRR1269912	JPBG01000000
FSL_R8_7381	297.2	93.8	-68%	45.78	33	3.06E+06	35,358	2.20E+05	SAMN02741594	SRR1269913	JPBH01000000
FSL_R8_7389	386.1	128.6	-67%	67.06	17	2.95E+06	34,779	4.77E+05	SAMN02741595	SRR1270023	JPBI01000000
FSL_R8_7399	389.5	134.2	-66%	69.63	19	2.89E+06	98,001	2.89E+05	SAMN02741596	SRR1270024	JPBJ01000000
FSL_R8_7427	236.8	75.2	-68%	37.85	23	3.09E+06	16,522	3.34E+05	SAMN02741597	SRR1270025	JPBK01000000
FSL_R8_7450	221.7	161.1	-27%	82.80	16	2.95E+06	97,984	4.81E+05	SAMN02741598	SRR1270026	JPBL01000000
FSL_R8_7460	195.8	137.4	-30%	67.02	22	3.09E+06	17,201	5.21E+05	SAMN02741599	SRR1270027	JPBM01000000
FSL_R8_7474	109.0	60.3	-45%	30.00	98	3.05E+06	8,573	6.99E+04	SAMN02741600	SRR1269862	JPBN01000000
FSL_R8_7478	596.8	222.8	-63%	105.36	30	3.06E+06	5,756	4.78E+05	SAMN02741601	SRR1269863	JPBO01000000
FSL_R8_7489	463.9	169.8	-63%	82.47	20	3.06E+06	17,201	5.08E+05	SAMN02741602	SRR1269864	JPBP01000000
FSL_R8_7493	624.7	217.2	-65%	108.47	24	3.06E+06	21,100	5.08E+05	SAMN02741603	SRR1269865	JPBQ01000000
FSL_R8_7534	630.5	228.9	-64%	105.63	20	3.12E+06	24,237	5.08E+05	SAMN02741604	SRR1269867	JPBR01000000
FSL_R8_7554	535.4	196.5	-63%	94.18	20	3.10E+06	17,211	5.08E+05	SAMN02741605	SRR1269868	JPBS01000000
FSL_R8_7559	292.3	204.7	-30%	99.92	25	3.10E+06	29,821	3.32E+05	SAMN02741606	SRR1269869	JPBT01000000
FSL_R8_7571	129.5	89.8	-31%	43.32	38	3.09E+06	37,616	1.91E+05	SAMN02741607	SRR1269870	JPBU01000000
FSL_R8_7585	81.5	44.6	-45%	21.49	115	3.12E+06	14,407	6.15E+04	SAMN02741608	SRR1269871	JPBV01000000
FSL_R8_7591	677.0	241.1	-64%	114.19	28	3.11E+06	6,375	5.16E+05	SAMN02741609	SRR1269872	JPBW01000000
FSL_R8_7599	502.0	183.4	-63%	87.77	34	3.11E+06	7,431	4.81E+05	SAMN02741610	SRR1269873	JPBX01000000
FSL_R8_7603	715.4	254.5	-64%	124.83	19	3.09E+06	5,298	5.21E+05	SAMN02741611	SRR1269874	JPBY01000000
FSL_R8_7635	468.7	172.5	-63%	80.51	16	3.10E+06	53,770	5.22E+05	SAMN02741612	SRR1269875	JPBZ01000000
FSL_R8_7676	185.8	127.5	-31%	64.40	30	3.06E+06	35,487	2.73E+05	SAMN02741614	SRR1269877	JPCA01000000
FSL_R8_7694	198.0	147.2	-26%	70.59	27	3.10E+06	21,100	4.77E+05	SAMN02741615	SRR1269878	JPCB01000000
FSL_R8_7716	116.9	65.0	-44%	32.33	58	3.14E+06	33,001	1.20E+05	SAMN02741616	SRR1269879	JPC01000000
FSL_R8_7722	282.1	97.6	-65%	48.09	29	3.06E+06	29,821	2.73E+05	SAMN02741617	SRR1269880	JPCD01000000
FSL_R8_7761	492.5	178.9	-64%	90.59	16	2.95E+06	97,984	4.81E+05	SAMN02741618	SRR1269881	JPCE01000000
FSL_R8_7786	301.5	102.2	-66%	50.90	27	3.09E+06	40,340	2.68E+05	SAMN02741619	SRR1269882	JPCF01000000
FSL_R8_7806	385.1	135.1	-65%	68.93	23	2.89E+06	8,857	2.79E+05	SAMN02741620	SRR1269883	JPCG01000000
FSL_R8_7812	535.6	199.4	-63%	93.59	26	3.11E+06	8,528	5.16E+05	SAMN02741621	SRR1269884	JPCH01000000
FSL_R8_7820	203.3	141.2	-31%	67.80	42	3.14E+06	10,341	4.90E+05	SAMN02741622	SRR1269885	JPCI01000000
FSL_R8_7825	281.1	194.8	-31%	91.26	39	3.14E+06	6,847	5.16E+05	SAMN02741623	SRR1269886	JPCJ01000000
FSL_R8_7829	78.4	40.9	-48%	19.44	143	3.08E+06	10,162	4.71E+04	SAMN02741624	SRR1269887	JPCK01000000
FSL_R8_7833	371.7	127.6	-66%	62.08	33	3.13E+06	51,934	2.20E+05	SAMN02741625	SRR1269888	JPCL01000000

FSL	Sequence Read File Sizes			Reference Mapping	De Novo Assembled, Filtered Contigs [>1X k-mer coverage, >500 bp]				GenBank Accessions for BioProject PRJNA245909		
	Raw reads [Mb]	Trimmed, Paired End reads [Mb]	Percent Loss	Average bp coverage via mapping to J1776	Number of contigs	Total size of contigs	Median contig size	N50 contig length	BioSample	SRA	WGS version
FSL_R8_7842	653.1	214.3	-67%	105.35	33	3.10E+06	8,528	3.05E+05	SAMN02741626	SRR1269889	JPCM01000000
FSL_R8_7846	484.9	159.8	-67%	81.32	33	3.10E+06	6,494	2.92E+05	SAMN02741627	SRR1269890	JPCN01000000
FSL_R8_7860	570.7	204.5	-64%	97.95	20	3.13E+06	72,580	4.84E+05	SAMN02741628	SRR1269891	JPCO01000000
FSL_R8_7866	540.5	159.2	-71%	76.53	22	3.13E+06	53,770	4.20E+05	SAMN02741629	SRR1269892	JPCP01000000
FSL_R8_7870	306.0	168.9	-45%	82.60	23	3.10E+06	32,625	4.43E+05	SAMN02741630	SRR1269893	JPDF01000000
FSL_R8_7881	205.8	86.0	-58%	43.00	49	3.12E+06	33,756	1.34E+05	SAMN02741631	SRR1269894	JPDE01000000
FSL_R8_7902	113.0	66.6	-41%	33.63	95	3.05E+06	18,443	6.07E+04	SAMN02741632	SRR1269457	JPDD01000000
FSL_R8_7914	675.3	243.6	-64%	125.88	14	2.89E+06	156,963	3.56E+05	SAMN02741633	SRR1269848	JPDC01000000
FSL_R8_7926	503.7	184.9	-63%	89.52	21	3.07E+06	29,471	4.98E+05	SAMN02741634	SRR1269850	JPDB01000000
FSL_R8_8446	675.8	235.1	-65%	117.35	22	3.10E+06	16,522	3.35E+05	SAMN02741635	SRR1269851	JPDA01000000
FSL_R8_8476	579.3	213.2	-63%	97.54	27	3.11E+06	8,528	4.80E+05	SAMN02741636	SRR1269852	JPCZ01000000
FSL_R8_8511	319.0	144.1	-55%	71.78	29	3.10E+06	8,724	2.97E+05	SAMN02741637	SRR1269853	JPCY01000000
FSL_R8_8816	168.6	112.7	-33%	55.22	27	3.12E+06	21,038	4.49E+05	SAMN02741638	SRR1269854	JPCX01000000
FSL_R8_9398	76.2	48.2	-37%	23.65	67	3.08E+06	27,853	9.15E+04	SAMN02741639	SRR1269855	JPCW01000000
FSL_R8_9399	149.4	102.7	-31%	49.74	41	3.03E+06	41,524	2.03E+05	SAMN02741640	SRR1269856	JPCV01000000
FSL_R8_9402	1035.4	370.6	-64%	183.16	19	3.09E+06	5,298	5.21E+05	SAMN02741641	SRR1269857	JPCU01000000
FSL_T1_0023	115.1	78.8	-32%	38.60	36	3.06E+06	28,389	1.92E+05	SAMN02741642	SRR1269858	JPCT01000000
FSL_T1_0946	168.6	106.1	-37%	52.17	53	3.06E+06	21,197	1.60E+05	SAMN02741643	SRR1269859	JPCS01000000
FSL_V1_0009	587.8	210.2	-64%	105.73	16	2.99E+06	49,055	5.14E+05	SAMN02741644	SRR1269860	JPCR01000000
FSL_V1_0117	44.9	16.8	-63%	7.97	456	2.90E+06	3,809	1.14E+04	SAMN02741645	SRR1269861	JPCQ01000000
FSL_R8_5528	661.2	326.7	-51%	not calculated	18	3.10E+06	19,875	5.15E+05	SAMN02741486	SRR1269934	JPIW01000000
FSL_R8_7653	235.4	100.4	-57%	not calculated	30	3.06E+06	32,318	2.55E+05	SAMN02741613	SRR1269876	JPIV01000000

FSL R8-5528 and FSL R8-7653 initial coverage was too low for de-novo assembly. Reported values are from MiSeq re-sequencing.

Average coverage was calculated by mapping sequence reads to J1776 reference genome using BWA-MEM and parsing results files.

**TABLE S3.** Additional genomes used in the kSNP analysis.

<b>Strain</b>	<b>NCBI Assembly</b>	<b>Comment</b>
J1776	GCA_000438705.2	reference strain for lineage I isolate analysis
1/2a F6854	GCA_000167135.1	
J2818	GCA_000168655.1	
F6900	GCA_000168615.1	
J0161	GCA_000168635.2	
FSL N3-165	GCA_000168535.1	
FSL J2-003	GCA_000168455.1	
10403S	GCA_000168695.2	
SLCC5850	GCA_000307045.1	
EGD	GCA_000582845.1	
Finland 1988	GCA_000168595.2	
SLCC7179	GCA_000306985.1	
08-5578	GCA_000093125.2	
08-5923	GCA_000022925.1	
EGD-e	GCA_000196035.1	reference strain for lineage II isolate analysis
SLCC2372	GCA_000210815.2	
FSL R2-561	GCA_000168575.2	
SLCC2479	GCA_000307005.1	
LO28	GCA_000168675.1	
N53-1	GCA_000382945.1	
La111	GCA_000382925.1	
SLCC2376	GCA_000250715.1	
SLCC2376	GCA_000250715.1	
FSL J2-071	GCA_000168475.1	
HCC23	GCA_000021185.1	
L99	GCA_000209755.1	
M7	GCA_000218305.1	
SLCC2540	GCA_000306905.1	
SLCC2482	GCA_000210795.2	
FSL N1-017	GCA_000168515.1	
SLCC2755	GCA_000197755.2	
FSL J1-175	GCA_000168415.1	
FSL J1-194	GCA_000168395.1	
07PF0776	GCA_000258905.1	
Clip80459	GCA_000026705.1	
L312	GCA_000307085.1	
4b F2365	GCA_000008285.1	
LL195	GCA_000318055.1	
SLCC2378	GCA_000307615.1	
4b H7858	GCA_000167155.1	
ATCC 19117	GCA_000307025.1	
Scott A	GCA_000212455.1	
HPB2262	GCA_000168815.1	
J2-064	GCA_000438625.1	



**TABLE S4.** Gene presence/absence enrichment analysis for selected groups of isolates.

Subtype or other information defining groups tested for gene enrichment		Number of genes significantly enriched <sup>a</sup> in		Putative explanatory mobile element (size)
Group 1 (n isolates)	Group 2 (n isolates)	Group 1	Group 2	
CU-8-96 (n=12)	CU-11-320 (n=19)	29	0	Prophage (21.2 kb) <sup>b</sup>
CU-258-322 (n=4)	CU-258-323 (n=4)	32 <sup>c</sup>	0	Prophage (45.7 kb) <sup>b</sup>
CU-262-319 (n=3)	CU-262-79 (n=12)	69	0	Prophage (47.5 kb) <sup>b</sup>
Initially Persistent (n=92)	Sporadic (n=29)	0	0	na <sup>d</sup>
Statistically Persistent (n=38) <sup>e</sup>	Sporadic of same PFGE types (n=16) <sup>e</sup>	0	0	na
SNP gr. 1, Deli 2 (n=7)	SNP gr. 1, not Deli 2 (n=36)	0	0	na
SNP gr. 1, Deli 16 (n=4)	SNP gr. 1, not Deli 16 (n=39)	0	10 <sup>f</sup>	na
SNP gr. 1, Deli 10 (n=4)	SNP gr. 1, not Deli 10 (n=39)	0	0	na
SNP gr. 1, Deli 18 (n=3)	SNP gr. 1, not Deli 24 (n=40)	0	0	na
SNP gr. 1, Deli 21 (n=3)	SNP gr. 1, not Deli 21 (n=40)	0	0	na
SNP gr. 1, Deli 24 (n=5)	SNP gr. 1, not Deli 24 (n=38)	0	0	na
CU-258-69, Deli 7 (n=3)	CU-258-69, not Deli 7 (n=8)	0	0	na
SNP gr. 3, Deli 28 (n=6)	SNP gr. 3, not Deli 28 (n=9)	0	0	na
SNP gr. 3, Deli 2 (n=3)	SNP gr. 3, not Deli 2 (n=12)	0	0	na

<sup>a</sup> False discovery rate (FDR) corrected p-value from Fisher's Exact test < 0.05.

<sup>b</sup> Some significantly enriched genes were phage related, consistent with an intact prophage encoded in the genomes of group 1 isolates but absent in group 2 isolates.

<sup>c</sup> Each of the 32 genes had an FDR adjusted p-value = 0.051 and were present in all CU-258-322 isolates but absent in all CU-258-323 isolates. With only 4 isolates in each group, the test power was insufficient to pass FDR correction.

<sup>d</sup> na, not applicable.

<sup>e</sup> 'statistically persistent' includes all putatively persistent isolates with statistically fewer median SNP count differences than comparison isolates (Table 4). 'Sporadic' includes all available sporadic isolates of a subtype represented among statistically persistent isolates. Subsequent rows present the groups subset by subtype and deli of isolation.

<sup>f</sup> Details on these 10 genes in Table S7.

**TABLE S5.** Phylogenetic model selection by path sampling.

Model <sup>a</sup>	Likelihood (L) and Bayes Factor (BF) support for the choice of row model over column model			
	CS	SS	CR	SR
<i>For 179 lineage I isolates</i>				
Coalescent population, Strict clock (CS)	$L_{CS} = -62141$	-	-	-
Bayesian Skyline population, Strict clock (SS)	85 <sup>b</sup>	$L_{SS} = -62056$	-	-
Coalescent population, lognormal Relaxed clock (CR)	141	56	$L_{CR} = -62001$	-
Bayesian Skyline population, lognormal Relaxed clock (SR)	157	72	16	$L_{SR} = -61985$
<i>For 9 lineage II isolates</i>				
Coalescent population, Strict clock (CS)	$L_{CS} = -8929.3$	-	-	-
Bayesian Skyline population, Strict clock (SS)	1.7	$L_{SS} = -8927.7$	-	-
Coalescent population, lognormal Relaxed clock (CR)	-2.4	-4.1	$L_{CR} = -8931.8$	-
Bayesian Skyline population, lognormal Relaxed clock (SR)	1.1	-0.6	3.5	$L_{SR} = -8928.2$

<sup>a</sup> Models varied based on their tree prior (constant coalescent or Bayesian Skyline) and clock (strict or lognormal relaxed) specifications. Models were otherwise identical in specification of the GTR model of site substitution and input SNP data. For the lineage I models, strict clock models were sampled using 10 path steps of 5 million generations and relaxed clock models sampled using 10 steps of 10 million generations. For the lineage II models, all were sampled using 10 path steps of 10 million generations.

<sup>b</sup> BF calculated as  $L_{SS} - L_{CS}$  and similarly for all the off-diagonals.

**TABLE S6.** Presence or absence of previously described *L. monocytogenes* plasmids among sequenced isolates.

Isolate PFGE type	Number of isolates of a PFGE type with >70% of the sequence of a plasmid (GenBank accession, reference) absent (-) or present (+).															
	pLM1- 2bUG1 (FR667692, (1))		pLM1- 2cUG1 (FR667691, (1))		pLM33 (GU244485, (1))		pLM7UG1 (FR667690, (1))		pLM80 (AADR01000010, AADR01000058, (1))		pLMIV (NZ_CM001470, (2))		pLM5578 (CP001603, (1))		pJ1776 (NC_022046)	
	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
CU-8-340	0	5	0	5	0	5	0	5	5	0	5	0	5	0	5	0
CU-40-96	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0
CU-8-96	20	0	20	0	20	0	20	0	20	0	20	0	20	0	20	0
CU-11-320	36	0	36	0	36	0	36	0	36	0	36	0	36	0	36	0
CU-259-322	5	0	5	0	5	0	5	0	0	5	5	0	5	0	0	5
CU-258-322	7	0	7	0	7	0	7	0	0	7	7	0	7	0	0	7
CU-258-323	8	0	8	0	8	0	8	0	0	8	8	0	8	0	0	8
CU-258-69	18	0	18	0	18	0	18	0	16	2	18	0	18	0	1	17
CU-262-318	4	0	4	0	4	0	4	0	1	3	4	0	4	0	4	0
CU-262-334	2	0	2	0	2	0	2	0	2	0	2	0	2	0	2	0
CU-262-319	6	0	6	0	6	0	6	0	6	0	6	0	6	0	6	0
CU-262-79	21	0	21	0	21	0	21	0	21	0	21	0	21	0	21	0
CU-11-282	5	0	5	0	5	0	5	0	5	0	5	0	5	0	5	0
CU-11-326	3	0	3	0	3	0	3	0	0	3	3	0	3	0	3	0
CU-294-321	11	0	11	0	11	0	11	0	11	0	11	0	11	0	11	0
CU-55-266	4	0	4	0	4	0	4	0	0	4	4	0	4	0	4	0
CU-57-267	12	0	12	0	12	0	12	0	12	0	12	0	12	0	12	0

**References for Table S6**

1. **Kuene C, Voget S, Pischmarov J, Oehm S, Goesmann A, Daniel R, Hain T, Chakraborty T.** 2010. Comparative analysis of plasmids in the genus *Listeria*. *PLoS ONE* **5**.
2. **den Bakker HC, Bowen BM, Rodriguez-Rivera LD, Wiedmann M.** 2012. FSL J1-208, a virulent uncommon phylogenetic lineage IV *Listeria monocytogenes* strain with a small chromosome size and a putative virulence plasmid carrying internalin-like genes. *Appl Environ Microbiol* **78**:1876-1889.



**Table S7. Genes significantly enriched in the 38 strains in SNP group 1 not from Store 16.**

ITEP gene cluster ID	adjusted P-value	Count of isolates of SNP group 1 with the given gene				Gene information	Predicted gene position in								
		absent among isolates		present among isoaltes			FSL_R8_7554 Contig0001 b			FSL_R8_6780 Contig0001					
		not from deli 16	from deli 16	not from deli 16	from deli 16		Annotation	Length	Nucleotide Sequence	Protein Sequence	Start	Stop	Strand	Start	Stop
2464	0.043	1	3	38	1	a transcriptional regulator	716	ATGAGTGAA(MSEQVRVLV	MSEQVRVLV	176,563	175,847	-	77,746	78,462	+
2465	0.043	1	3	38	1	multidrug transporter cfla	1190	ATGGAAAAA(MEKNIETKKI	MEKNIETKKI	315,203	314,013	-	315,226	314,036	-
2466	0.043	1	3	38	1	aminobenzoate synthetase	1706	ATGAGCTTATMSLLRFDFEC	MSLLRFDFEC	351,977	350,271	-	352,000	350,294	-
2468	0.043	1	3	38	1	peptidoglycan-binding protein	1004	GTGAGTAAA(MSKNVKKIVI	MSKNVKKIVI	307,810	308,814	+	388,088	387,084	-
2470	0.043	1	3	38	1	sugar transporter	1916	GTGAGTGCTTMSASKLSLPR	MSASKLSLPR	305,505	307,421	+	305,528	307,444	+
2471	0.043	1	3	38	1	pts fructose transporter subunit iia	1898	ATGGATACTC(MDTQKEILA)	MDTQKEILA)	396,822	398,720	+	299,076	297,178	-
2472	0.043	1	3	38	1	gntr family transcriptional regulator	377	ATGAAGTTTG(MKFDDSKPI)	MKFDDSKPI)	215,875	216,252	+	480,023	479,646	-
2474	0.043	1	3	38	1	dna glycosylase	1088	ATGAAGAGA(MKRLTWDEI	MKRLTWDEI	7,058	5,970	-	145,798	146,886	+
2476	0.043	1	3	38	1	membrane protein	1475	ATGATAGGG(MIGKVKSISV	MIGKVKSISV	6,308	7,783	+	57,372	58,847	+
2477	0.043	1	3	38	1	histidine kinase	728	ATGCTACCGC(MLPVFICEDN	MLPVFICEDN	178,721	177,993	-	178,744	178,016	-

a The single isolate of SNP group 1 from Deli 16 that had these 10 genes present was FSL\_R8\_6780. This isolate was not found in Clade R with the other 3 isolates from Store 16, but rather mixed within other isoaltes of SNP group 1 from other delis. This suggests the possibility of separate sub-populations of the same SNP group 1 subtype within deli 16, which have separate genes presence/absence patterns.

b These contigs IDs are those submitted to GenBank in the WGS archive. Isolate FSL R8\_7554 is a SNP group 1 isolate not from deli 16 and isolate R8\_6780 an isolate from deli 16 not present clade R