Title: Screening and Genetic Characterization of Locus of Heat Resistance (LHR) in meat-borne *E. coli*

Running Title: Extreme Heat Resistance in US Red meat

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TableS1. Percentage[a] of pathotypes[b] amongst *E. coli* originating from different meat animal systems.

	EHEC	STEC	EPEC	EC
Beef (n=1548)	8.9	41.9	7.6	41.7
Veal (n=994)	38.6	5.3	35.4	20.6
Sheep (n=511)	9.2	90.2	0.2	0.4
Pork (n=1070)	1.3	30.7	15.8	52.1

[a]Percentage is presented for each pathotype of isolates across each animal system in a row.

[b] Types of *E. coli*: Enterohaemorrhagic *E. coli (*EHEC; *stx*$^+$ *eae*$^+$), Shiga toxigenic *E. coli* (STEC; *stx*$^+$ *eae*$^-$), Enteropathogenic *E. coli* (EPEC; stx$^-$ *eae*$^+$), and non-pathogen background *E. coli* (EC).

Table S2. Genotypes of LHR positive pathotypic *E. coli*

Isolate	Number of LHR bands[a]	ClpK2[b]	Heat resistance[c]	Virulence genes[d]	Pathotype[e]
Sheep1271-PO4	4	0	-	*stx1, stx2*	STEC
Beef 190.1	3	0	-	*stx2, hlyA*	STEC
Beef 579.1	4	0	-	*stx1, stx2, hlyA*	STEC

[a]LHR bands refers to amplicons produced from four-plex PCR that detected 5'-, 3'-, and two internal regions of the 14-15Kb LHR.

[b]ClpK2 identified by PCR targeting ClpK2 gene in second variant of LHR.

[c]Heat resistance was determined by growth after exposure to 60°C for 20minutes.

[d]Virulence genes identified were Shiga toxins 1 and 2 (*stx1, stx2*), intimin (*eae*), and the enterohemlytic hemolysin (*hlyA*).

[e]Pathotypes: Enterohemorrhagic *E. coli (*EHEC; *stx*$^{+}$ *eae*$^{+}$), Shiga toxigenic *E. coli* (STEC; *stx*$^{+}$ *eae*$^{-}$), Enteropathogenic *E. coli* (EPEC; stx^{-} *eae*$^{+}$).