

Table S1. List of primers used for amplification of selected antimicrobial resistance and virulence genes of *E. coli* isolates.

Target Gene	Direction	Primer Sequence (5'-3')	Annealing temp (°C)	Amplicon size (bp)	References
<i>blaIMP</i>	Forward	TCGTTTGAAGAAGTTAACG	60	568	[31]
	Reverse	ATGTAAGTTTCAAGAGTGATGC			
<i>blaVIM</i>	Forward	GGTGTGTTGGTCGCATATCGCAA	60	502	[31]
	Reverse	ATTCAGCCAGATCGGCATCGGC			
<i>blaNDM</i>	Forward	GGTTTGGCGATCTGGTTTTTC	60	624	[31]
	Reverse	CGGAATGGCTCATCACGATC			
<i>blaKPC</i>	Forward	CATTCAAGGGCTTTCTTGCTGC	60	498	[31]
	Reverse	ACGACGGCATAGTCATTTGC			
<i>blaOXA-48</i>	Forward	TTCTGTTGTTTGGGTTTCGC	55	190	[32]
	Reverse	ACGCAGGAATTGAATTTGTTC			
<i>tet(A)</i>	Forward	GGTTCACTCGAACGACGTCA	56	577	[33]
	Reverse	CTGTCCGACAAGTTGCATGA			
<i>tet(B)</i>	Forward	CCTCAGCTTCTCAACGCGTG	56	634	[33]
	Reverse	GCACCTTGCTCATGACTCTT			
<i>blaCTX-M</i>	Forward	ATGTGCAGYACCAGTAARGTKATGGC	50	593	[34]
	Reverse	TGGGTRAARTARGTSACCAGAAYCAGCGG			
<i>blaTEM</i>	Forward	GTCGCCGCATACACTATTCTCA	68	258	[32]
	Reverse	CGCTCGTCGTTTGGTATGG			
<i>blaSHV</i>	Forward	GCCTTGACCGCTGGGAAAC	68	319	[32]
	Reverse	GGCGTATCCCGCAGATAAAT			
<i>eaeA</i>	Forward	ATGCTTAGTGCTGGTTTAGG	58	248	[35]
	Reverse	GCCTTCATCATTTTCGCTTTC			
<i>east</i>	Forward	CACAGTATATCCGAAGGC	50	97	[36]
	Reverse	CGAGTGACGGCTTTGTAG			
<i>hlyA</i>	Forward	AACAAGGATAAGCACTGTTCTGGCT	63	1177	[37]
	Reverse	ACCATATAAGCGGTCATTCCCGTCA			
<i>ompA</i>	Forward	AGCTATCGCGATTGCAGTG	52	919	[38]
	Reverse	GGTGTGCGCAGTAACCGG			
<i>traT</i>	Forward	GGTGTGGTGGCGATGAGCACAG	63	290	[39]
	Reverse	CACGGTTCAGCCATCCCTGAG			
<i>cnf1/2</i>	Forward	TCGTTATAAAATCAAACAGTG	51	446	[40]

<i>bfp</i>	Reverse	CTTTACAATATTGACATGCTG			
	Forward	AATGGTGCTTGCGCTTGCTGC			
	Reverse	GCCGCTTTATCCAACCTGGTA	56	324	[41]
<i>stx1</i>	Forward	TCTCAGTGGGCGTTCTTATG			
	Reverse	TACCCCTCAACTGCTAATA	58	388	[35]

Table S2. Multiplex PCR conditions used during amplification of antibiotic resistance and virulence genes of MDR *E. coli* isolates.

Program	Targeted Genes	Amplification conditions for resistance genes						Number of cycles
		Initial Denaturation	Denaturation	Annealing	Primer extension	Final extension	Amplicon size (bp)	
PCR 1	<i>blaIMP</i>	95 °C for 5 min	95 °C for 30 sec	60 °C for 30 sec	72 °C for 1 min	72 °C for 7 min	568	x35
	<i>blaVIM</i>	95 °C for 5 min	95 °C for 30 sec	60 °C for 30 sec	72 °C for 1 min	72 °C for 7 min	502	x35
	<i>blaNDM-1</i>	95 °C for 5 min	95 °C for 30 sec	60 °C for 30 sec	72 °C for 1 min	72 °C for 7 min	624	x35
	<i>qnrB</i>	95 °C for 5 min	95 °C for 30 sec	60 °C for 30 sec	72 °C for 1 min	72 °C for 7 min	264	x35
	<i>qnrA</i>	95 °C for 5 min	95 °C for 30 sec	60 °C for 30 sec	72 °C for 1 min	72 °C for 7 min	605	x35
PCR 2	<i>tetA</i>	95 °C for 5 min	94 °C for 45 sec	55 °C for 30 sec	72 °C for 1 min	72 °C for 10 min	577	x30
	<i>tetB</i>	95 °C for 5 min	94 °C for 45 sec	55 °C for 30 sec	72 °C for 1 min	72 °C for 10 min	637	x30
	<i>blaSHV</i>	95 °C for 5 min	94 °C for 45 sec	55 °C for 30 sec	72 °C for 1 min	72 °C for 10 min	319	x30
	<i>blaTEM</i>	95 °C for 5 min	94 °C for 45 sec	55 °C for 30 sec	72 °C for 1 min	72 °C for 10 min	258	x30
	<i>blaCTX-M</i>	95 °C for 5 min	94 °C for 45 sec	55 °C for 30 sec	72 °C for 1 min	72 °C for 10 min	593	x35
PCR 3	<i>blaKPC</i>	95 °C for 5 min	94 °C for 45 sec	55 °C for 30 sec	72 °C for 1 min	72 °C for 10 min	498	x35
	<i>blaOXA-48</i>	95 °C for 5 min	94 °C for 45 sec	55 °C for 30 sec	72 °C for 1 min	72 °C for 10 min	238	x35
	<i>east</i>	94 °C for 5 min	94 °C for 1 min	58 °C for 30 sec	68 °C for 3 min	72 °C for 10 min	97	x30
PCR 4	<i>ompA</i>	94 °C for 5 min	94 °C for 1 min	58 °C for 30 sec	68 °C for 3 min	72 °C for 10 min	919	x30
	<i>cnf</i>	94 °C for 5 min	94 °C for 1 min	58 °C for 30 sec	68 °C for 3 min	72 °C for 10 min	446	x30
	<i>traT</i>	94 °C for 5 min	94 °C for 1 min	58 °C for 30 sec	68 °C for 3 min	72 °C for 10 min	290	x30
	<i>bfp</i>	95 °C for 5 min	95 °C for 30sec	55 °C for 30 sec	72 °C for 3 min	72 °C for 7 min	324	x35
PCR 5	<i>stx-1</i>	95 °C for 5min	95 °C for 30 sec	55 °C for 30 sec	72 °C for 3 min	72 °C for 7 min	338	x35
	<i>eae</i>	95 °C for 5 min	95 °C for 30 sec	55 °C for 30 sec	72 °C for 3 min	72 °C for 7 min	248	x35
	<i>hlyA</i>	95 °C for 5 min	95 °C for 30 sec	55 °C for 30 sec	72 °C for 3 min	72 °C for 7 min	1177	x35