

Supplementary data

Table S1. List of primers used in this study

Gene	Primer	Sequence (5'–3')	Product (bp)	Reference or source
<i>qnrA</i>	<i>qnrAF</i>	AGAGGATTTCTCACGCCAGG	580	1
	<i>qnrAR</i>	TGCCAGGCACAGATCTTGAC		
<i>qnrB</i>	<i>qnrBF</i>	GGCATTGAAATTCGCCACTG	264	1
	<i>qnrBR</i>	TTTGCTGCTCGCCAGTCGAA		
<i>qnrS</i>	<i>qnrSF</i>	GCAAGTTCATTGAACAGGGT	428	1
	<i>qnrSR</i>	TCTAAACCGTCGAGTTCGGCG		
<i>qnrC</i>	<i>qnrCF</i>	GGGTTGTACATTTATTGAATCG	307	2
	<i>qnrCR</i>	CACCTACCCATTTATTTTCA		
<i>qnrD</i>	<i>qnrDF</i>	GGGTTGATTTAACTGATAC	311	3
	<i>qnrDR</i>	TTCGCACTTTTCTAATATGAC		
<i>aac(6')-Ib</i>	<i>aac(6')-IbF</i>	TTGCGATGCTCTATGAGTGGCTA	482	4
	<i>aac(6')-IbR</i>	CTCGAATGCCTGGCGTGTTT		
<i>qepA</i>	<i>qepAF</i>	GCAGGTCCAGCAGCGGGTAG	218	3
	<i>qepAR</i>	CTTCCTGCCGAGTATCGTG		
<i>oqxA</i>	<i>oqxAF</i>	CTCGGCGCGATGATGCT	392	5
	<i>oqxAR</i>	CCACTCTTCACGGGAGACGA		
<i>oqxB</i>	<i>oqxBF</i>	TTCTCCCCCGGCGGGAAGTAC	512	5
	<i>oqxBR</i>	CTCGGCCATTTTGGCGCGTA		
<i>gyrA</i>	<i>gyrAF</i>	GCGATGTCGGTCATTGTT	490	This study
	<i>gyrAR</i>	ACTTCCGTCAGGTTGTGC		
<i>gyrB</i>	<i>gyrBF</i>	TGAAATGACCCGCCGTAA	458	This study
	<i>gyrBR</i>	GCTTGCCTTTCTTCACTTTGTA		
<i>parC</i>	<i>parCF</i>	TGCGTTGCCGTTTATTGG	470	This study
	<i>parCR</i>	GCAGGTTATGCGGTGGAAT		
<i>parE</i>	<i>parEF</i>	AACTGCTGGCGGAGATGG	490	This study

Supplemental References

1. **Cattoir V, Poirel L, Rotimi V, Soussy CJ, Nordmann P.** 2007. Multiplex PCR for detection of plasmid-mediated quinolone resistance qnr genes in ESBL-producing enterobacterial isolates. *J Antimicrob Chemother* **60**:394-397.
2. **Kim HB, Park CH, Kim CJ, Kim EC, Jacoby GA, Hooper DC.** 2009. Prevalence of plasmid-mediated quinolone resistance determinants over a 9-year period. *Antimicrob Agents Chemother* **53**:639-645.
3. **Zhao JY, Dang H.** 2012. Coastal seawater bacteria harbor a large reservoir of plasmid-mediated quinolone resistance determinants in Jiaozhou Bay, China. *Microb Ecol* **64**:187-199.
4. **Park CH, Robicsek A, Jacoby GA, Sahm D, Hooper DC.** 2006. Prevalence in the United States of *aac(6)-Ib-cr* encoding a ciprofloxacin-modifying enzyme. *Antimicrob Agents Chemother* **50**:3953-3955.
5. **Kim HB, Wang M, Park CH, Kim EC, Jacoby GA, Hooper DC.** 2009. *oqxAB* encoding a multidrug efflux pump in human clinical isolates of Enterobacteriaceae. *Antimicrob Agents Chemother* **53**:3582-3584.

Table S2. Plasmid-mediated PMQR and ESBL genes

ALL E.coli (n=590)		ESBL+PMQR (n=110)		ESBL+PMQR Type	
ESBL	PMQR	ESBL	PMQR	Type	No.
CTX-M-14 (163, 27.6%)	<i>aac(6')-Ib-cr</i> (116, 19.7%)	CTX-M-14 (60)	<i>aac(6')-Ib-cr</i> (72)	CTX-M-14+ <i>aac(6')-Ib-cr</i>	23
CTX-M-55 (47, 8.0%)	<i>qepA</i> (85, 14.4%)	CTX-M-15 (20)	<i>qepA</i> (29)	CTX-M-15+ <i>aac(6')-Ib-cr</i>	18
CTX-M-15 (30, 5.1%)	<i>oqxAB</i> (23, 3.8%)	CTX-M-55 (12)	<i>oqxAB</i> (12)	CTX-M-14+ <i>qepA</i>	16
	<i>qnrS</i> (13, 2.2%)		<i>qnrS</i> (9)	CTX-M-55+ <i>aac(6')-Ib-cr</i>	7
	<i>qnrB</i> (9, 1.5%)		<i>qnrB</i> (8)	CTX-M-15+ <i>qepA</i>	6
				CTX-M-14+ <i>qnrB</i>	6
				CTX-M-14+ <i>qnrS</i>	4
				CTX-M-14+ <i>oqxAB</i>	4