

Supplementary File

Table S1. Antibacterial resistance patterns for *E. coli*.

Antibiotic resistance patterns	Amount
AMK	6
AMP	3
ATM	1
GEN	1
SXT	1
TET	15
AMK-CHL	1
AMK-CTX	1
AMK-CRO	1
AMK-AMP	3
AMK-GEN	3
AMK-SXT	1
AMK-TET	11
AMP-CHL	1
AMP-PIP	5
AMP-SXT	1
AMP-TET	3
CHL-TET	1
CTX-AMP	1
GEN-AMP	1
GEN-CAZ	1
SXT-TET	9
AMK-GEN-AMP	4
AMK-AMP-TET	2
AMK-CTX-AMP	1
AMK-CTX-TET	2
AMK-GEN-TET	2
AMK-SXT-TET	2
AMP-PIP-AMC	1
AMP-PIP-SAM	8
AMP-PIP-SXT	2
AMP-PIP-TET	13
AMP-SAM-TET	2
AMP-SXT-TET	3
CFZ-AMP-AMC	1
CFZ-AMP-PIP	1
FEP-AMP-PIP	1
GEN-AMP-SXT	1
GEN-SXT-TET	1
SXT-CHL-TET	1
AMP-PIP-CHL-TET	4
AMK-AMP-SXT-TET	1
AMK-CTX-AMP-TET	1
AMK-SXT-CHL-TET	1
AMK-GEN-AMP-SXT	1
AMK-GEN-CTX-AMP	1

AMK-GEN-MEN-AMP	1
CFZ-AMP-PIP-CHL	1
CFZ-AMP-PIP-SAM	1
CFZ-AMP-PIP-TET	1
CFZ-CTX-AMP-PIP	1
AMP-PIP-SXT-TET	10
AMP-SAM-CST-TET	1
AMP-SAM-SXT-TET	2
CAZ-CTX-CRO-AMP	1
CFZ-FEP-AMP-PIP	1
CIP-LVX-MXF-TET	1
GEN-AMP-PIP-SXT	1
GEN-AMP-PIP-TET	5
GEN-AMP-SXT-TET	4
SXT-CIP-MXF-TET	1
AMK-AMP-SXT-CHL-TET	3
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AMK-GEN-AMP-SXT-TET	6
AMK-CRO-AMP-SXT-CHL	1
AMK-CTX-AMP-CHL-TET	1
AMK-GEN-CTX-CRO-TET	1
CFZ-AMP-PIP-AMC-SAM	1
CFZ-AMP-PIP-CHL-TET	1
CFZ-AMP-PIP-SXT-TET	2
CFZ-CTX-FEP-AMP-PIP	7
AMP-PIP-CIP-LVX-MXF	1
AMP-PIP-SAM-CHL-TET	2
AMP-PIP-SAM-CST-TET	1
AMP-PIP-SAM-SXT-TET	1
AMP-PIP-SXT-CHL-TET	10
AMP-SAM-SXT-CHL-TET	2
CHL-CIP-LVX-MXF-TET	1
CTX-AMP-SXT-CHL-TET	1
GEN-AMP-PIP-CHL-TET	1
GEN-AMP-PIP-SAM-SXT	1
GEN-AMP-PIP-SAM-TET	2
GEN-AMP-PIP-SXT-TET	2
GEN-CTX-CRO-AMP-SXT	1
IPM-AMC-SAM-SXT-TET	1
SXT-CIP-LVX-MXF-TET	1
IPM-CFZ-AMP-PIP-AMC	1
GEN-CFZ-AMP-PIP-SXT-TET	1
GEN-CFZ-CTX-FEP-AMP-PIP	3
GEN-CTX-CRO-AMP-SXT-TET	1
AMK-GEN-AMP-PIP-SAM-TET	1
AMK-CTX-AMP-SXT-CHL-TET	1
AMK-GEN-CAZ-CTX-CRO-AMP	1
AMK-GEN-CTX-AMP-SXT-TET	2
AMK-GEN-CTX-CRO-AMP-SXT	2
AMP-PIP-CIP-LVX-MXF-TET	1
CFZ-AMP-PIP-AMC-CHL-TET	1
CFZ-AMP-PIP-SAM-CHL-TET	1

AMP-PIP-SAM-SXT-CHL-TET	1
AMP-CHL-CIP-LVX-MXF-TET	1
AMP-SXT-CHL-CIP-LVX-MXF	1
CFZ-CTX-FEP-ATM-AMP-PIP	5
GEN-AMP-PIP-SXT-CHL-TET	4
CTX-CRO-AMP-SXT-CHL-TET	1
AMK-GEN-MEN-CTX-CRO-AMP	1
AMK-GEN-CAZ-CTX-CRO-AMP-SXT	1
AMK-GEN-CAZ-CTX-CRO-AMP-TET	2
AMK-CAZ-CTX-CRO-AMP-CHL-TET	1
AMK-CAZ-CTX-CRO-AMP-SXT-TET	2
AMK-GEN-CTX-AMP-SXT-CHL-TET	2
AMK-GEN-CTX-CRO-AMP-SXT-TET	1
AMP-PIP-SXT-CIP-LVX-MXF-TET	14
CFZ-CTX-AMP-PIP-SXT-CHL-TET	3
CFZ-CTX-FEP-AMP-PIP-SXT-TET	1
CFZ-CTX-FEP-AMP-PIP-SAM-CHL	1
AMP-SXT-CHL-CIP-LVX-MXF-TET	2
CFZ-CTX-FEP-ATM-AMP-PIP-TET	1
CFZ-FEP-AMP-PIP-SAM-SXT-TET	1
CFZ-FEP-ATM-AMP-PIP-SAM-TET	1
CFZ-CTX-FEP-ATM-AMP-PIP-CST	1
GEN-AMP-PIP-CIP-LVX-MXF-TET	1
IPM-CFZ-AMP-PIP-AMC-SXT-TET	1
GEN-CFZ-CTX-FEP-AMP-PIP-TET	1
GEN-CFZ-CTX-AMP-PIP-SAM-TET	1
GEN-CFZ-CTX-FEP-AMP-PIP-SAM	4
GEN-AMP-PIP-SXT-CHL-MXF-TET	1
GEN-CAZ-CTX-CRO-AMP-SXT-TET	1
GEN-CTX-CRO-AMP-SXT-CHL-TET	1
GEN-MEN-CAZ-AMP-SXT-CHL-TET	1
AMK-GEN-AMP-PIP-SAM-SXT-CHL-TET	5
AMK-GEN-CAZ-CTX-CRO-AMP-SXT-TET	5
AMK-CAZ-CTX-CRO-AMP-SXT-CHL-TET	5
AMK-GEN-CTX-CRO-AMP-SXT-CHL-TET	1
AMP-PIP-SXT-CHL-CIP-LVX-MXF-TET	1
AMP-SAM-SXT-CHL-CIP-LVX-MXF-TET	1
CFZ-CTX-FEP-AMP-PIP-SXT-CHL-TET	3
CFZ-CTX-FEP-ATM-AMP-PIP-SAM-CHL	1
CFZ-CTX-FEP-ATM-AMP-PIP-SAM-TET	1
CFZ-CTX-FEP-ATM-AMP-PIP-SAM-TZP	1
GEN-CFZ-CTX-AMP-PIP-SAM-CHL-TET	1
GEN-CFZ-CTX-AMP-PIP-SAM-MXF-TET	3
GEN-CFZ-CTX-AMP-PIP-SXT-CHL-TET	1
GEN-CFZ-CTX-FEP-AMP-PIP-CHL-TET	1
GEN-AMP-PIP-SXT-CIP-LVX-MFX-TET	1
GEN-CFZ-CTX-FEP-AMP-PIP-SXT-TET	2
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-TET	3
GEN-CAZ-CTX-CRO-AMP-SXT-CHL-TET	2
AMK-GEN-CFZ-AMP-PIP-SAM-SXT-CHL-TET	1
AMK-GEN-AMP-PIP-SXT-CIP-LVX-MXF-TET	1

AMK-GEN-AMP-PIP-AMC-SAM-SXT-CHL-TET	1
AMK-GEN-CAZ-CTX-CRO-AMP-SXT-CHL-TET	12
CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-CHL-TET	1
CFZ-CTX-FEP-AMP-PIP-AMC-SAM-CHL-TET	1
CFZ-CTX-FEP-ATM-AMP-PIP-CIP-LVX-MXF	2
CFZ-CTX-FEP-ATM-AMP-PIP-SAM-CHL-TET	1
CFZ-CTX-FEP-ATM-AMP-PIP-SXT-CHL-TET	4
GEN-AMP-PIP-SAM-SXT-CHL-CIP-MXF-TET	1
GEN-AMP-PIP-SAM-SXT-CIP-LVX-MXF-TET	3
GEN-AMP-PIP-SXT-CHL-CIP-LVX-MXF-TET	4
GEN-CFZ-CTX-FEP-AMP-PIP-SAM-MXF-TET	1
GEN-CFZ-CTX-FEP-AMP-PIP-SXT-CHL-TET	2
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-TET	1
GEN-CFZ-FEP-AMP-PIP-SAM-SXT-CHL-TET	1
AMK-GEN-CFZ-CTX-FEP-AMP-PIP-SAM-SXT-TET	4
AMK-GEN-AMP-PIP-SAM-SXT-CIP-LVX-MXF-TET	2
AMK-GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SXT-TET	2
CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-SAM-CHL-TET	1
CFZ-CAZ-AMP-AMC-SAM-SXT-CHL-CIP-LVX-MXF	1
AMK-GEN-MEN-CAZ-CTX-CRO-AMP-SXT-CHL-TET	1
CFZ-CTX-FEP-ATM-AMP-PIP-CIP-LVX-MXF-TET	2
CFZ-CTX-FEP-ATM-AMP-PIP-SAM-CST-SXT-TET	1
CFZ-CTX-FEP-ATM-AMP-PIP-SAM-CIP-LVX-MXF	1
CFZ-CTX-FEP-ATM-AMP-PIP-CST-CIP-LVX-MXF	1
CFZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CHL-TET	5
GEN-CFZ-CTX-FEP-AMP-PIP-SAM-CIP-MXF-TET	1
GEN-CFZ-AMP-PIP-SXT-CHL-CIP-LVX-MXF-TET	1
GEN-CFZ-AMP-PIP-SAM-SXT-CIP-LVX-MXF-TET	1
GEN-CFZ-CTX-AMP-PIP-CHL-CIP-LVX-MXF-TET	1
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-CHL-TET	1
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-MXF-TET	1
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SXT-CHL-TET	2
CFZ-CTX-FEP-ATM-AMP-PIP-SXT-CIP-LVX-MXF-TET	2
AMK-GEN-CFZ-CTX-FEP-AMP-PIP-SAM-CHL-CIP-TET	1
AMK-GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-TET	2
AMK-GEN-CFZ-CTX-ATM-AMP-PIP-CIP-LVX-MXF-TET	1
GEN-CFZ-AMP-PIP-SAM-SXT-CHL-CIP-LVX-MXF-TET	1
GEN-CFZ-CTX-AMP-PIP-SXT-CHL-CIP-LVX-MXF-TET	2
GEN-CFZ-CTX-FEP-AMP-PIP-CST-SXT-CIP-LVX-MXF	1
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-CIP-LVX-MXF-TET	8
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-CIP-MXF-TET	1
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SXT-CHL-MXF-TET	1
GEN-CFZ-FEP-AMP-PIP-SAM-CHL-CIP-LVX-MXF-TET	1
GEN-CFZ-FEP-AMP-PIP-SXT-CHL-CIP-LVX-MXF-TET	1
AMK-GEN-CFZ-CTX-FEP-AMP-PIP-SXT-CIP-LVX-MXF-TET	1
AMK-GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CHL-TET	1
AMK-GEN-CFZ-AMP-PIP-AMC-SAM-SXT-CIP-LVX-MXF-TET	1
GEN-CFZ-AMP-PIP-AMC-SAM-SXT-CHL-CIP-LVX-MXF-TET	1
CFZ-CTX-FEP-ATM-AMP-PIP-SAM-CHL-CIP-LVX-MXF-TET	1
CFZ-CTX-FEP-ATM-AMP-PIP-SXT-CHL-CIP-LVX-MXF-TET	3
GEN-CFZ-CTX-FEP-AMP-PIP-SAM-CHL-CIP-LVX-MXF-TET	1

GEN-CFZ-CTX-FEP-AMP-PIP-SXT-CHL-CIP-LVX-MXF-TET	9
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CHL-MXF-TET	1
CFZ-CTX-FEP-ATM-AMP-PIP-CST-SXT-CHL-CIP-LVX-MXF-TET	1
CFZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CHL-CIP-LVX-MXF-TET	1
AMK-GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SXT-CIP-LVX-MXF-TET	1
GEN-CFZ-CTX-FEP-AMP-PIP-SAM-SXT-CHL-CIP-LVX-MXF-TET	2
GEN-CFZ-CAZ-AMP-PIP-AMC-SAM-SXT-CHL-CIP-LVX-MXF-TET	1
GEN-CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-CHL-CIP-LVX-MXF-TET	1
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CIP-LVX-MXF-TET	1
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SXT-CHL-CIP-LVX-MXF-TET	10
AMK-GEN-CFZ-CTX-FEP-AMP-PIP-SAM-CST-SXT-CHL-CIP-LVX-MXF	1
AMK-GEN-CFZ-CTX-FEP-AMP-PIP-SAM-SXT-CHL-CIP-LVX-MXF-TET	1
AMK-GEN-CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-SAM-CIP-LVX-MXF-TET	1
AMK-GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CIP-LVX-MXF-TET	1
AMK-GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SXT-CHL-CIP-LVX-MXF-TET	4
CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CHL-CIP-LVX-MXF-TET	1
GEN-CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CIP-LVX-MXF-TET	1
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CHL-CIP-LVX-MXF-TET	5
GEN-CFZ-FEP-ATM-AMP-PIP-SAM-CST-SXT-CHL-CIP-LVX-MXF-TET	1
IPM-MEN-CFZ-CAZ-CTX-FEP-AMP-PIP-AMC-SAM-TZP-SXT-CHL-TET	1
AMK-GEN-CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CIP-LVX-MXF-TET	1
AMK-GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CHL-CIP-LVX-MXF-TET	1
AMK-GEN-CFZ-CTX-ATM-AMP-PIP-AMC-SAM-SXT-CHL-CIP-LVX-MXF-TET	1
GEN-CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CHL-CIP-LVX-MXF-TET	1
GEN-CFZ-CTX-FEP-ATM-AMP-PIP-SAM-CST-SXT-CHL-CIP-LVX-MXF-TET	1
AMK-GEN-CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-AMC-SAM-SXT-CIP-LVX-MXF-TET	1
AMK-GEN-CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-SAM-SXT-CHL-CIP-LVX-MXF-TET	2
GEN-CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-AMC-SAM-TZP-SXT-CIP-LVX-MXF-TET	1
GEN-IPM-CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-AMC-SAM-TZP-SXT-CHL-CIP-LVX-MXF-TET	1
GEN-IPM-MEN-CFZ-CAZ-CTX-FEP-ATM-AMP-PIP-AMC-SAM-TZP-SXT-CIP-LVX-MXF-TET	1
AMK-GEN-IPM-MEN-CFZ-CAZ-CTX-FEP-AMP-PIP-AMC-SAM-TZP-CST-SXT-CHL-CIP-LVX-MXF-TET	1

Table S2. Percentages of antimicrobial resistance in *E. coli* of different origins and years.

Antibiotic	Pet dogs			Working dogs		Pet cats
	2012-2013 (n=78)	2015 (n=57)	2021 (n=157)	2012-2013 (n=51)	2021 (n=140)	2021 (n=71)
Amikacin	74.36%	17.54%	2.55%	78.43%	11.43%	14.08%
Gentamicin	60.26%	59.65%	28.03%	31.37%	40.00%	35.21%
Imipenem	- ^a	0.00%	1.91%	- ^a	2.86%	0.00%
Meropenem	5.13%	0.00%	0.00%	0.00%	2.14%	0.00%
Cefazolin	- ^a	50.88%	41.40%	- ^a	37.86%	63.38%
Ceftazidime	44.87%	7.02%	3.82%	1.96%	3.57%	4.23%
Cefotaxime	56.41%	45.61%	34.39%	27.45%	30.00%	57.75%
Cefepime	- ^a	43.86%	34.39%	- ^a	25.71%	57.75%
Aztreonam	- ^a	19.30%	22.93%	- ^a	16.43%	45.07%
Ampicillin	83.33%	75.44%	74.52%	41.18%	75.71%	83.10%
Piperacillin	- ^a	71.93%	68.79%	- ^a	68.57%	81.69%
Amoxicillin-Clavulanic acid	- ^a	3.51%	3.18%	- ^a	6.43%	5.63%
Ampicillin-Sulbactam	- ^a	31.58%	21.66%	- ^a	32.14%	33.80%

Piperacillin-Tazobactam	- ^a	0.00%	0.64%	-	2.14%	2.82%
Colistin	0%	5.26%	3.82%	0%	0.71%	1.41%
Trimethoprim-Sulfamethoxazole	67.95%	49.12%	50.32%	25.49%	50.71%	36.62%
Chloramphenicol	38.46%	28.07%	33.76%	11.76%	42.86%	23.94%
Ciprofloxacin	- ^a	49.12%	32.48%	- ^a	20.71%	33.80%
Levofloxacin	- ^a	47.37%	31.85%	- ^a	18.57%	33.80%
Moxifloxacin	- ^a	47.37%	33.12%	- ^a	25.00%	35.21%
Tetracycline	71.79%	59.65%	65.61%	54.90%	80.00%	60.56%
Ceftriaxone	56.41%	- ^a	- ^a	3.92%	- ^a	- ^a

^a The antibiotic resistance was not tested.

Table S3. Drug resistance pattern of *E. coli*.

Resistance pattern	2012-2013 (n=78)	Pet dogs		Working dogs		Pet cats
		2015 (n=57)	2021 (n=157)	2012-2013 (n=51)	2021 (n=140)	2021 (n=71)
0R	5.13%	17.54%	16.56%	7.84%	16.43%	11.27%
1R	3.85%	1.75%	7.64%	17.65%	4.29%	5.63%
2R	14.10%	7.02%	13.38%	33.33%	6.43%	11.27%
3R	7.69%	8.77%	7.64%	19.61%	12.86%	11.27%
4R	19.23%	10.53%	17.83%	7.84%	10.71%	9.86%
5R	19.23%	14.04%	3.18%	7.84%	7.14%	2.82%
6R	28.21%	8.77%	5.73%	5.88%	17.14%	7.04%
7R	2.56%	3.51%	6.37%	0.00%	10.00%	21.13%
8R	0.00%	12.28%	8.92%	0.00%	7.14%	8.45%
9R	-	14.04%	8.92%	-	4.29%	4.23%
10R	-	1.75%	2.55%	-	2.14%	4.23%
11R	-	0.00%	0.64%	-	0.71%	2.82%
12R	-	0.00%	0.64%	-	0.71%	0.00%

Table S4. Percentage of antimicrobial resistance in ESBL-*E. coli* of different origins and years.

Antibiotic	Pet dogs		Working dogs		Pet cats
	2012-2013 (n=41)	2015 (n=27)	2021 (n=60)	2021 (n=48)	2021 (n=43)
Amikacin	14.63%	29.63%	6.67%	12.50%	23.26%
Gentamicin	70.73%	85.19%	58.33%	72.92%	53.49%
Imipenem	0.00%	0.00%	1.67%	6.25%	0.00%
Meropenem	0.00%	0.00%	0.00%	6.25%	0.00%
Cefazolin	100.00%	100.00%	100.00%	100.00%	100.00%
Ceftazidime	19.51%	14.81%	8.33%	10.42%	6.98%
Cefotaxime	100.00%	96.30%	90.00%	87.50%	95.35%
Cefepime	95.12%	92.59%	90.00%	72.92%	95.35%
Aztreonam	73.17%	40.74%	58.33%	47.92%	74.42%
Ampicillin	100.00%	100.00%	100.00%	100.00%	100.00%
Piperacillin	100.00%	100.00%	100.00%	100.00%	100.00%
Amoxicillin-Clavulanate	4.88%	3.70%	1.67%	10.42%	4.65%
Ampicillin-Sulbactam	41.46%	48.15%	38.33%	52.08%	37.21%
Piperacillin-Tazobactam	2.44%	0.00%	1.67%	6.25%	4.65%
Colistin	0.00%	11.11%	6.67%	2.08%	2.33%

Trimethoprim-Sulfamethoxazole	90.24%	51.85%	76.67%	56.25%	44.19%
Chloramphenicol	58.54%	44.44%	71.67%	52.08%	32.56%
Ciprofloxacin	80.49%	66.67%	53.33%	33.33%	55.81%
Levofloxacin	78.05%	62.96%	53.33%	29.17%	55.81%
Moxifloxacin	78.05%	62.96%	55.00%	43.75%	58.14%
Tetracycline	82.93%	62.96%	83.33%	97.92%	76.74%

Table S5. Drug resistance pattern of ESBL-*E. coli*.

	2012-2013	Pet dogs 2015	2021	Working dogs 2021	Pet cats 2021
3R ^a	0.00%	3.70%	6.67%	0.00%	11.63%
4R ^a	4.88%	11.11%	3.33%	4.17%	4.65%
5R ^a	4.88%	18.52%	5.00%	6.25%	4.65%
6R ^a	12.20%	3.70%	13.33%	22.92%	11.63%
7R ^a	17.07%	3.70%	15.00%	25.00%	34.88%
8R ^a	24.39%	25.93%	23.33%	18.75%	13.95%
9R ^a	14.63%	29.63%	23.33%	12.50%	6.98%
10R ^a	21.95%	3.70%	6.67%	6.25%	6.98%
11R ^a	0.00%	0.00%	1.67%	2.08%	4.65%
12R ^a	0.00%	0.00%	1.67%	2.08%	0.00%
≥ 7R ^a	78.05%	62.96%	71.67%	66.67%	67.44%

^a The antibiotics categories.

Table S6. Detection rates of drug resistance genes.

	Genes	AG-type (AMK&GEN) (n=34)	A-type (AMK) (n=34)	G-type (GEN) (n=111)	Drug sensitive type (n=74)
aminoglycosides	<i>armA</i>	8.82% (3/34)	8.82% (3/34)	0%	0%
	<i>rmtB</i>	91.18% (31/34)	91.18% (31/34)	0.90% (1/111)	0%
	<i>aac (3)-II</i>	55.88% (19/34)	55.88% (19/34)	72.97% (81/111)	1.35% (1/74)
	<i>aac (6')-Ib</i>	29.41% (10/34)	29.41% (10/34)	15.32% (17/111)	2.70% (2/74)
trimethoprim-sul- famethoxazole	Genes	Drug resistant type (n=143)	Drug sensitive type (n=76)		
	<i>sul1</i>	48.95% (70/143)	7.89% (6/76)		
	<i>sul2</i>	79.02% (113/143)	25% (19/76)		-
	<i>sul3</i>	19.58% (28/143)	1.32% (1/76)		
phenicols	Genes	Drug resistant type (n=118)	Drug sensitive type (n=82)	Intermediately sensitive (n=19)	
	<i>folR</i>	80.51% (95/118)	0%	0%	
	<i>cmlA</i>	31.36% (37/118)	10.98% (9/82)	52.63% (10/19)	-
fluoroquinolones	Genes	Resistant to any antibiotic (CIP/LVX/MXF) (n=130)	Sensitive or in- termediately sensitive (n=89)		
	<i>qnrA</i>	0%	0%		
	<i>qnrB</i>	1.54% (2/130)	1.12% (1/89)		
	<i>qnrC</i>	0%	0%		-
	<i>qnrS</i>	16.15% (21/130)	47.19% (42/89)		
	<i>aac (6')-Ib-cr</i>	9.23% (12/130)	5.62% (5/89)		

	Genes	Drug resistant type (n=181)	Drug sensitive type (n=38)
tetracyclines	<i>tet</i> (A)	85.08% (154/181)	2.63% (1/38)
	<i>tet</i> (B)	21.55% (39/181)	0%
	<i>tet</i> (M)	3.31% (6/181)	0%
	<i>tet</i> (X1-X5)	0%	0%

Table S7. Phylogenetic grouping of *E. coli* in 2021.

phylogenetic grouping	All	pet dogs	pet cats	working dogs
A	37.77%	33.76%	5.63%	58.57%
B1	30.16%	30.57%	35.21%	27.14%
B2	16.03%	17.20%	42.25%	1.43%
C	2.99%	0.64%	4.23%	5.00%
D	1.09%	2.55%	0.00%	0.00%
E	4.89%	5.73%	2.82%	5.00%
F	6.79%	8.92%	9.86%	2.86%
E.clades	0.27%	0.64%	0.00%	0.00%
B2+D	17.12%	19.75%	42.25%	1.43%
A+C	40.76%	34.39%	9.86%	63.57%

Table S8. Phylogenetic grouping of ESBL-*E. coli*.

Phylogenetic grouping	2012–2013 Pet dogs	2015 Pet dogs	2021 Pet dogs	2021 Pet cats	2021 Working dogs
A	29.27%	0.00%	26.67%	2.33%	47.92%
B1	26.83%	29.63%	30.00%	41.86%	33.33%
B2	2.44%	25.93%	18.33%	30.23%	2.08%
C	4.88%	25.93%	1.67%	6.98%	6.25%
D	4.88%	0.00%	3.33%	0.00%	0.00%
E	9.76%	11.11%	6.67%	2.33%	6.25%
F	19.51%	7.41%	13.33%	16.28%	4.17%
E.clades	2.44%	0.00%	0.00%	0.00%	0.00%
B2+D	7.32%	25.93%	21.67%	30.23%	2.08%
A+C	34.15%	25.93%	28.33%	9.30%	54.17%

Table S9. Collection Information of *E. coli*.

Sampling date	Isolate ID	Age	Gender	Disease	Location	Animal
2012-2013	s4a	<1	Un-known	Diar-rheic	Jilin Veterinary Research Institute	Pet dog
	s7a	<1	Male	Diar-rheic		
	s9a	<1	Male	Diar-rheic		
	s10	<1	Female	Diar-rheic		
	s17a	<1	Female	Others		
	s21a	<1	Male	Others	Zhou Ping Pet Hospital	Pet dog
	z3a	1–5	Female	Diar-rheic		
	z4a	>10	Male	Others		
	z5e	1–5	Male	Others		

z6a	<1	Female	Diarrheic	Chuncheng Pet Hospital	Pet dog
z7a	1–5	Female	Others		
z8a	<1	Female	Diarrheic		
z9a	<1	Female	Others		
z10a	<1	Male	Diarrheic		
z11a	<1	Female	Diarrheic		
z12a	<1	Female	Diarrheic		
z13a	<1	Male	Diarrheic		
z14a	<1	Female	Diarrheic		
z16a	<1	Female	Diarrheic		
z17a	<1	Male	Diarrheic		
z18a	<1	Male	Diarrheic		
z22a	6–10	Male	Others		
z23-2a	6–10	Female	Others		
z23-3a	6–10	Female	Others		
z23-4a	1–5	Male	Others		
z24a	<1	Male	Diarrheic		
z25a	<1	Female	Others		
z28a	<1	Male	Others		
z30a	<1	Female	Diarrheic		
z34a	1–5	Male	Health		
z35a	1–5	Male	Health		
z36a	<1	Female	Others		
z40a	<2	Female	Diarrheic		
z41a	1–5	Male	Others		
z42a	<1	Male	Diarrheic		
z43a	<1	Male	Diarrheic		
z45a	1–5	Male	Others		
z46a	<1	Male	Others		
z47a	<1	Male	Others		
z48a	<1	Male	Others		
1123a	Un-known	Un-known	Un-known	Chuncheng Pet Hospital	Pet dog
1126-1a	Un-known	Un-known	Un-known		

1126-3a	Un-known	Un-known	Un-known
1128a	Un-known	Un-known	Un-known
1129-2a	Un-known	Un-known	Un-known
1130-1a	Un-known	Un-known	Un-known
1130-2b	Un-known	Un-known	Un-known
1130d	Un-known	Un-known	Un-known
1141a	Un-known	Un-known	Un-known
1158c	Un-known	Un-known	Un-known
1160a	Un-known	Un-known	Un-known
1202-1a	Un-known	Un-known	Un-known
1202-2a	Un-known	Un-known	Un-known
1203a	Un-known	Un-known	Un-known
1207-1a	Un-known	Un-known	Diar-rheic
1207-2b	Un-known	Un-known	Un-known
1208-2a	Un-known	Un-known	Un-known
1209-1a	Un-known	Un-known	Un-known
1211-2a	<1	Un-known	Diar-rheic
1212-2a	Un-known	Un-known	Diar-rheic
1215-1a	Un-known	Un-known	Un-known
1215-2a	Un-known	Un-known	Un-known
1217-2a	Un-known	Un-known	Un-known
1217-3c	Un-known	Un-known	Un-known
1219a	Un-known	Un-known	Un-known
1221-2a	Un-known	Un-known	Un-known
1226-1a	Un-known	Un-known	Un-known

	1228-2a	Un-known	Un-known	Un-known		
	1228c	Un-known	Un-known	Un-known		
	1230-1a	Un-known	Un-known	Un-known		
	130107-1a	Un-known	Un-known	Un-known		
	130107-2d	Un-known	Un-known	Un-known		
	C2a	Un-known	Un-known	Un-known		
	C4a	Un-known	Un-known	Un-known		
	c6a	Un-known	Un-known	Un-known		
	c7a	Un-known	Un-known	Un-known		
	c8a	Un-known	Un-known	Un-known		
	c9a	Un-known	Un-known	Un-known		
2015	528-2	>10	Male	Others	Zhou Ping Pet Hospital	Pet dog
	528-4	6-10	Male	Others		
	528-11	<1	Female	Others		
	528-12	<1	Male	Others		
	528-14	6-10	Male	Others		
	528-15	6-10	Female	Un-known		
	528-16	6-10	Female	Others		
	528-17	<1	Male	Others		
	528-19	<1	Female	Others		
	528-21	1–5	Female	Others		
	528-22	1–5	Female	Others		
	528-23	1–5	Male	Un-known		
	604-24	<1	Female	Others		
	529-41	1–5	Male	Diarrheic		
	601-42	<1	Male	Others		
	601-43	1-5	Female	Diarrheic		
	601-44	6–10	Female	Others		
	529-45	<1	Male	Others		
	603-46	6–10	Male	Others		
	601-48-2	<1	Female	Others		
	603-53	<1	Male	Others		
	601-61	<1	Male	Others		
	601-62	Un-known	Un-known	Others		

601-64	1-5	Female	Diar-rheic
603-66-2	<1	Female	Un-known
601-67	6–10	Female	Others
601-68	<1	Female	Others
603-71	1–5	Female	Diar-rheic
601-78	Un-known	Female	Others
529-79	<1	Female	Un-known
604-80	<1	Male	Un-known
601-81	<1	Female	Un-known
601-82	1-5	Male	Un-known
601-83	<1	Male	Others
603-86	<2	Male	Others
603-88	1–5	Female	Un-known
603-90	Un-known	Male	Others
604-93	1–5	Male	Un-known
604-96	Un-known	Female	Diar-rheic
604-100	<1	Male	Diar-rheic
604-101	Un-known	Male	Others
604-103	Un-known	Male	Un-known
603-109	>10	Male	Others
604-111	Un-known	Female	Un-known
604-112	<1	Female	Un-known
603-113	<1	Female	Un-known
529-a2	6–10	Male	Others
529-a3	>10	Male	Others
529-a4	1–5	Female	Others
529-a5	1–5	Female	Health
529-a6	1–5	Female	Diar-rheic
603-a9	1–5	Female	Others
603-c1	1–5	Female	Others
604-C6	<1	Male	Others
603-CB2	Adult	Male	Others

	604-CB3 604-CB4	Adult Adult	Female Female	Others Others		
2021	HP121	>10	Male	Diar-rheic	Zhou Ping Pet Hospital	Pet dog
	HP123	1-5	Male	Health		
	HP124	1-5	Female	Others		
	HP125	>10	Female	Health		
	HP126	1-5	Male	Diar-rheic		
	HP129	1-5	Female	Others		
	HP131	<1	Male	Un-known		
	HP132	<1	Male	Un-known		
	HP133	<1	Male	Un-known		
	HP134	<1	Female	Un-known		
	HP135	<1	Female	Un-known		
	HP136	<1	Female	Un-known		
	HP137	<1	Female	Un-known		
	HP138	1-5	Female	Un-known		
	HP140	>10	Female	Un-known		
	HP142	1-5	Un-known	Un-known		
	HP143	1-5	Un-known	Un-known		
	HP144	1-5	Male	Others		
	HP145	Un-known	Un-known	Un-known		
	HP146	1-5	Female	Un-known		
	HP147	1-5	Male	Health		
	HP148	1-5	Male	Others		
	HP152	1-5	Male	Un-known		
	HP155	1-5	Male	Un-known		
	HP156	1-5	Female	Un-known		
	HP157	1-5	Female	Un-known		
	HP158	1-5	Male	Un-known		
	HP160	1-5	Male	Un-known		

HP161	1–5	Female	Un-known
HP162	1–5	Male	Un-known
HP164	1–5	Male	Un-known
HP169	1–5	Male	Un-known
HP174	<1	Female	Un-known
HP175	<1	Female	Un-known
HP176	1–5	Female	Un-known
HP179	1–5	Male	Un-known
HP181	1–5	Male	Un-known
HP182	6–10	Female	Un-known
HP192	1–5	Male	Un-known
HP194	Un-known	Un-known	Un-known
HP196	6–10	Female	Un-known
HP197	<1	Male	Un-known
HP198	1–5	Male	Others
HP199	1–5	Female	Health
HP200	1–5	Male	Others
HP201	<1	Male	Diar-rheic
HP203	1–5	Male	Health
HP204	1–5	Female	Health
HP206	<1	Male	Diar-rheic
HP207	Un-known	Un-known	Un-known
HP208	<1	Male	Health
HP209	<1	Male	Health
HP210	<1	Male	Diar-rheic
HP211	<1	Male	Diar-rheic
HP213	<1	Male	Health
HP214	<1	Male	Diar-rheic
HP219	6–10	Female	Others
HP221	1–5	Female	Diar-rheic

HP222	Un-known	Female	Others
HP224	<1	Un-known	Diarrheic
HP225	<1	Female	Diarrheic
HP226	1–5	Female	Others
HP230	>10	Female	Others
HP232	6–10	Female	Others
HP233	6–10	Female	Others
HP235	6–10	Female	Others
HP236	1–5	Male	Others
HP237	6–10	Un-known	Others
HP238	1–5	Male	Others
HP239	<1	Male	Others
HP241	1–5	Male	Diarrheic
HP242	6–10	Un-known	Health
HP244	1–5	Male	Others
HP245	1–5	Male	Others
HP246	6–10	Female	Others
HP248	1–5	Un-known	Others
HP249	6–10	Male	Others
HP252	1–5	Un-known	Others
HP254	<1	Male	Others
HP256	1–5	Un-known	Others
HP259	1–5	Un-known	Others
HP260	1–5	Un-known	Others
HP261	1–5	Un-known	Health
HP262	6–10	Female	Others
HP263	1–5	Un-known	Others
HP264	<1	Un-known	Others
HP265	<1	Un-known	Others
HP266	<1	Un-known	Others
HP267	1–5	Un-known	Health
HP268	1–5	Female	Un-known

HP270	<1	Un-known	Others	Chong Yisheng, Central Hospital	Pet dog
HP271	<1	Female	Diar-rheic		
HP272	1–5	Female	Others		
HP273	<1	Male	Diar-rheic		
HP276	<1	Female	Others		
HP277	>10	Female	Others		
HP278	>10	Female	Others		
HP279	1–5	Female	Health		
HP280	6–10	Female	Health		
HP282	<1	Un-known	Health		
HP283	<1	Un-known	Health		
HP284	1–5	Male	Health		
HP286	1–5	Un-known	Health		
HP287	1–5	Un-known	Health		
HP288	1–5	Un-known	Health		
HP289	<1	Un-known	Health		
HP290	<1	Un-known	Health		
HP292	<1	Un-known	Health		
HP293	<1	Un-known	Diar-rheic		
HP296	<1	Female	Health		
HP297	<1	Male	Health		
HP300	1–5	Un-known	Others		
HP302	<1	Un-known	Diar-rheic		
HP305	<1	Un-known	Others		
HP306	Un-known	Un-known	Un-known		
HC1-1dc	Un-known	Un-known	Un-known		
HC1-3dc	Un-known	Un-known	Un-known		
HC1-5dc	Un-known	Un-known	Un-known		
HC1-6dc	Un-known	Un-known	Un-known		
HC1-8dc	Un-known	Un-known	Un-known		

HC1-14dc	Un-known	Un-known	Un-known		
HC1-15dc	Un-known	Un-known	Un-known		
HC1-16dc	Un-known	Un-known	Un-known		
HC1-18dc	Un-known	Un-known	Un-known		
HC1-20dc	Un-known	Un-known	Un-known		
HC1-22dc	Un-known	Un-known	Un-known		
HC1-24dc	Un-known	Un-known	Un-known		
HC1-26dc	Un-known	Un-known	Un-known		
HC1-27dc	Un-known	Un-known	Un-known		
HC1-28dc	Un-known	Un-known	Un-known		
HC1-32dc	Un-known	Un-known	Un-known		
HC1-37dc	Un-known	Un-known	Un-known		
HC1-38dc	Un-known	Un-known	Un-known		
HC1-39dc	Un-known	Un-known	Un-known		
HC1-40dc	Un-known	Un-known	Un-known		
HC1-41dc	Un-known	Un-known	Un-known		
HC1-43dc	Un-known	Un-known	Un-known		
HC1-46dc	Un-known	Un-known	Un-known		
HC1-48dc	Un-known	Un-known	Un-known		
HC1-49dc	Un-known	Un-known	Un-known		
HC1-51dc	Un-known	Un-known	Un-known		
HC1-52dc	Un-known	Un-known	Un-known		
HC1-55dc	Un-known	Un-known	Un-known		
HC1-57dc	Un-known	Un-known	Un-known		
HC2-2dc	Un-known	Un-known	Un-known	Chong Yisheng, Yangpu Street	Pet dog

	HC2-9dc	Un-known	Un-known	Un-known		
	HC2-31dc	Un-known	Un-known	Un-known		
	HC2-33dc	Un-known	Un-known	Un-known		
	HC2-50-1dc	Un-known	Un-known	Un-known		
	HC2-51dc	Un-known	Un-known	Un-known		
	HC3-4dc	Un-known	Un-known	Un-known	Animal Hospital of Jilin Agricultural University	Pet dog
	HC3-10dc	Un-known	Un-known	Un-known		
	HC4-3dc	Un-known	Un-known	Un-known		
	HC4-7dc	Un-known	Un-known	Un-known		
	HC4-10dc	Un-known	Un-known	Un-known	Dr. xie	Pet dog
	HC4-13dc	Un-known	Un-known	Un-known		
	HC4-14dc	Un-known	Un-known	Un-known		
2021	HP1	6–10	Male	Health		
	HP2	6–10	Male	Others		
	HP3	1–5	Male	Others		
	HP7	<1	Male	Un-known		
	HP10	<1	Male	Health		
	HP11	1–5	Male	Health		
	HP12	1–5	Male	Diar-rheic		
	HP13	1–5	Female	Health		
	HP14	1–5	Female	Health		
	HP15	1–5	Male	Diar-rheic		
	HP16	1–5	Male	Others	Zhou Ping Pet Hospital	Pet cat
	HP17	<1	Female	Diar-rheic		
	HP20	<1	Female	Diar-rheic		
	HP23	<1	Female	Health		
	HP24	<1	Male	Health		
	HP25	Un-known	Un-known	Un-known		
	HP27	1–5	Male	Others		
	HP28	<1	Female	Diar-rheic		
	HP31	Un-known	Un-known	Diar-rheic		

HP34	<1	Un-known	Un-known
HP39	1–5	Male	Others
HP40	<1	Male	Others
HP42	>10	Female	Others
HP44	6–10	Un-known	Un-known
HP45	1–5	Male	Others
HP46	<1	Male	Diar-rheic
HP53	<1	Un-known	Health
HP54	<1	Male	Health
HP55	<1	Male	Health
HP56	<1	Male	Health
HP60	1–5	Male	Others
HP61	1–5	Female	Others
HP62	1–5	Male	Others
HP64	<1	Male	Diar-rheic
HP65	1–5	Male	Health
HP67	<1	Male	Others
HP69	1–5	Female	Health
HP72	<1	Un-known	Others
HP73	1–5	Un-known	Others
HP74	<1	Female	Health
HP75	<1	Un-known	Diar-rheic
HP76	1–5	Un-known	Others
HP77	<1	Un-known	Others
HP78	<1	Un-known	Others
HP79	1–5	Un-known	Health
HP80	1–5	Un-known	Health
HP86	<1	Male	Health
HP87	1–5	Un-known	Others
HP88	1–5	Male	Others
HP90	<1	Un-known	Diar-rheic
HP91	1–5	Un-known	Health
HP93	<1	Un-known	Diar-rheic

HP94	1–5	Un-known	Others
HP95	<1	Male	Health
HP97	1–5	Female	Health
HP98	1–5	Male	Health
HP99	1–5	Male	Health
HP100	1–5	Un-known	Others
HP101	1–5	Un-known	Others
HP102	>10	Un-known	Others
HP107	1–5	Male	Health
HP110	1–5	Male	Others
HP111	1–5	Male	Others
HP112	<1	Female	Diar-rheic
HP113	1–	Un-known	Health
HP114	<1	Male	Diar-rheic
HP115	<1	Un-known	Others
HP116	Un-known	Un-known	Un-known
HP117	Un-known	Un-known	Un-known
HP118	Un-known	Un-known	Un-known
HP120	Un-known	Un-known	Un-known

Table S10. PCR primers and conditions.

Target	Primer	Sequence (5'–3')	Fragment size	Reference
<i>E.coli</i> 16S rDNA	F	TGTGGGAACGGCGAGTCGGAATAC	1467	[54]
	R	GGGCGCAGGGGATGAAACTCAAC		
<i>chuA</i>	chuA.1b	ATGGTACCGGACGAACCAAC	288	
	chuA.2	TGCCGCCAGTACCAAAGACA		
<i>yjaA</i>	yjaA.1b	CAAACGTGAAGTGTCAGGAG	211	[57]
	yjaA.2b	AATGCGTTCCTCAACCTGTG		
<i>TspE4C2</i>	TspE4C2.1b	CACTATTCGTAAGGTCATCC	152	
	TspE4C2.2b	AGTTTATCGCTGCGGGTTCGC		
<i>arpA</i>	AceK.f	AACGCTATTCGCCAGCTTGC	400	
	ArpA1.r	TCTCCCCATACCGTACGCTA		
<i>bla_{CTX-M}</i>	CTX-MU1	ATGTGCAGYACCAGTAARGT	544	[58]
	CTX-MU2	TGGGTRAARTARGTSACCAGA		
<i>bla_{SHV}</i>	SHV-F	ATTTGTCGCTTCTTTACTCGC	1018	
	SHV-R	TTTATGGCGTTACCTTTGACC		

<i>bla</i> _{TEM}	TEM-F	ATGAGTATTCAACATTTCCGT	861	[59]
	TEM-R	TTACCAATGCTTAATCAGTGA		
<i>bla</i> _{OXA-1}	O-for	GGCACCAGATTCAACTTTCAAG	564	[60]
	O-rev	GACCCCAAGTTTCCTGTAAGTG		
<i>tet</i> (A)	tet(A)-F	GTAATTCTGAGCACTGTGCGC	956	[61]
	tet(A)-R	CTGCCTGGACAACATTGCTT		
<i>tet</i> (B)	tet(B)-F	CTCAGTATTCCAAGCCTTTG	414	
	tet(B)-R	ACTCCCCTGAGCTTGAGGGG		
<i>tet</i> (M)	tet(M)-F	GTGGACAAAGGTACAACGAG	406	[62]
	tet(M)-R	CGGTAAAGTTCGTCACACAC		
<i>tet</i> (X1)	tet(X1) -F	CGAAAAATGTTGCTTGGCAGCTT	486	
	tet(X1) -R	AGTTGTTGAACGAATTAAGTCC		
<i>tet</i> (X2)	tet(X2) -F	CGGGATGTCCAAGGTAAGAAAA	343	
	tet(X2) -R	TGACAACGTCGTATGAATCAA		
<i>tet</i> (X3)	tet(X3) -F	GACACTTGATCTGCACAGGGATT	685	[63]
	tet(X3) -R	CCCTACAAAAGATGATGTCAAAC		
<i>tet</i> (X4)	tet(X4) -F	CTGATTCGTGTGACATCATCTTTTG	204	
	tet(X4) -R	GTTAAATTTCCCATTTGGTCAGATTA		
<i>tet</i> (X5)	tet(X5) -F	GGTATCAACATTTCAATGCTTG	265	
	tet(X5) -R	CGATTCGTCCTGCGTATCTTTTG		
<i>sul1</i>	sul1-F	CACCGGAAACATCGCTGCA	158	
	sul1-R	AAGTTCCGCCGCAAGGCT		
<i>sul2</i>	sul2-F	CTCCGATGGAGGCCGGTAT	190	[64]
	sul2-R	GGGAATGCCATCTGCCTTGA		
<i>sul3</i>	sul3-F	CCCATACCCGGATCAAGAATAA	143	
	sul3-R	CAGCGAATTGGTGCAGCTACTA		
<i>floR</i>	floR-F	GGCTTTCGTCAATTGCGTCTC	650	[47]
	floR-R	ATCGGTAGGATGAAGGTGAGGA		
<i>cmlA</i>	cmlA-F	TGCCAGCAGTGCCGTTTAT	900	
	cmlA-R	CACCGCCCAAGCAGAAGTA		
<i>qnrA</i>	qnrA-F	ATTTCTCACGCCAGGATTG	516	
	qnrA-R	GATCGGCAAAGGTTAGGTCA		
<i>qnrB</i>	qnrB-F	GATCGTGAAAGCCAGAAAGG	469	[65]
	qnrB-R	ACGATGCCTGGTAGTTGTCC		
<i>qnrS</i>	qnrS-F	ACGACATTCGTCAACTGCAA	417	
	qnrS-R	TAAATTGGCACCCCTGTAGGC		
<i>qnrC</i>	qnrC-F	GGGTTGTACATTTATTGAATCG	307	[66]
	qnrC-R	CACCTACCCATTTATTTTCA		
<i>aac</i> (6')-Ib-cr	aac (6')-Ib-cr-F	ATATGCG- GATCCAAAAACAAAGTTAGGCATCACAAG	810	[67]
	aac (6')-Ib-cr-R	ATATGCGAATTCCTTCAGTTCCTTCAAA- TAATGGAGA		
<i>rmtB</i>	rmtB-F	ACATCAACGATGCCCTCAC	725	[68]
	rmtB-R	AAGTTCTGTTCCGATGGTC		
<i>armA</i>	armA-F	ATGGATAAGAATGATGTTGTTAAG	774	
	armA-R	TTATTTCTGAAATCCACTAGTAATTA		
<i>aac</i> (3)- II	aac(3)- II -F	ACTGTGATGGGATACGCGTC	237	[69]
	aac(3)- II -R	CTCCGTCAGCGTTTCAGCTA		
<i>aac</i> (6')-Ib	aac (6')-Ib-F	ATGACTGAGCATGACCTTGC	519	
	aac (6')-Ib-R	TAGGCATCACTGCGTGTTT		
<i>bla</i> _{IMP}	IMP-F	GGAATAGAGTGGCTTAAYTCTC	232	[70]

<i>bla</i> _{KPC}	IMP-R	GGTTTAAYAAAACAACCACC	893	[71]
	KPC-F	ATGTCACGTGTATCGCCGTCT		
	KPC-R	TTTTCAGAGCCTTACTGCCC		
<i>bla</i> _{NDM}	NDM-F	TCGCCCCATATTTTGTCTAC	1080	[72]
	NDM-R	CTGGGTCGAGGTCAGGATAG		
<i>mcr-1</i>	F	AGTCCGTTTGTCTTGTGGC	320	
	R	AGATCCTTGGTCTCGGCTTG		
<i>mcr-2</i>	F	CAAGTGTGTTGGTCGCAGTT	715	
	R	TCTAGCCCCGACAAGCATACC		
<i>mcr-3</i>	F	AAATAAAAATTGTTCCGCTTATG	929	[73]
	R	AATGGAGATCCCCGTTTTT		
<i>mcr-4</i>	F	TCACCTTCATCACTGCGTTG	1116	
	R	TTGGTCCATGACTACCAATG		
<i>mcr-5</i>	F	ATGCGGTTGTCTGCATTATC	1644	
	R	TCATTGTGGTTGTCCTTTTCTG		

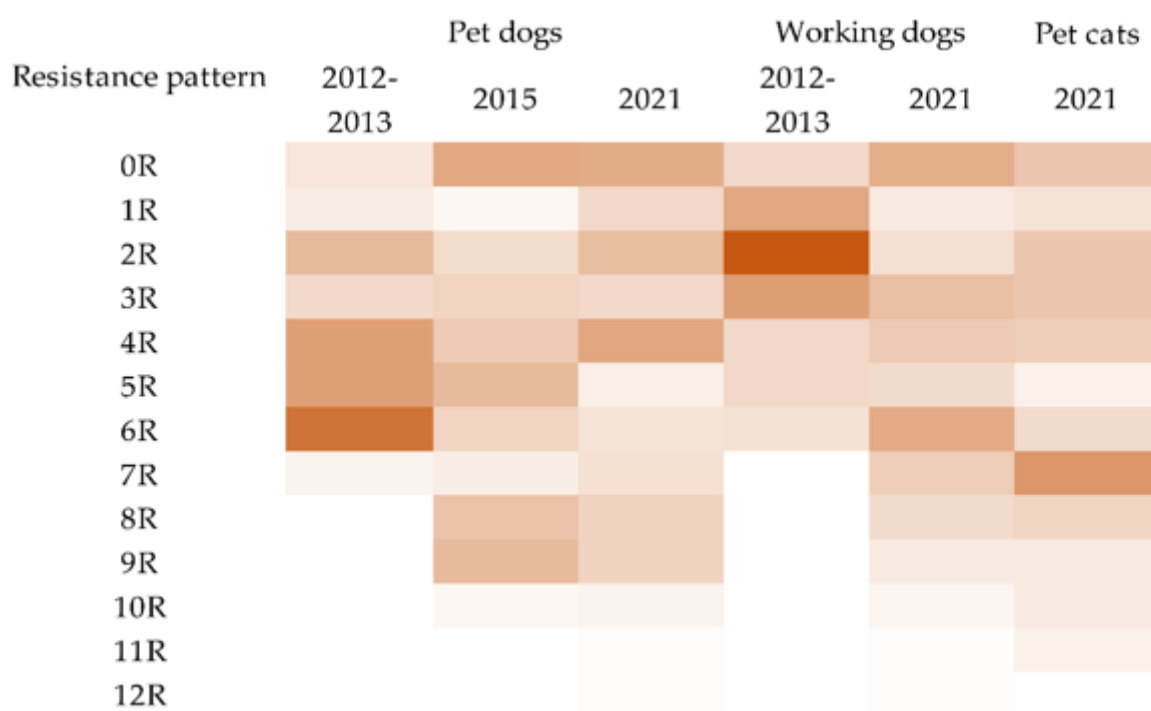


Figure S1. Drug resistance pattern of *E. coli*.