



# Supplementary Materials: Characterization of Beta-Lactamase and Fluoroquinolone Resistance Determinants in *Escherichia coli*, *Klebsiella pneumoniae*, and *Pseudomonas aeruginosa* Isolates from a Tertiary Hospital in Yola, Nigeria

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**Table S1.** Beta-lactam and fluoroquinolone resistance phenotypes in *E. coli*, *K. pneumoniae* and *P. aeruginosa* isolates collected during Period 1. MLST, multi-locus sequence type; ESBL, extended-spectrum beta-lactamase; AST, antimicrobial susceptibility testing; MEM, meropenem; ETP, ertapenem; IPM, imipenem.

ID	Organism	MLST	AST Phenotype			
			ESBL	Carbapenemase	Carbapenem Non-Susceptible	Fluoroquinolone Resistant
15949	<i>Escherichia coli</i>	ST692	None	metallo-beta-lactamase	MEM/ETP/IPM	Yes
16020	<i>Escherichia coli</i>	ST692	None	metallo-beta-lactamase	MEM/ETP/IPM	Yes
16029	<i>Escherichia coli</i>	ST692	None	metallo-beta-lactamase	MEM/ETP/IPM	Yes
16032	<i>Escherichia coli</i>	ST692	None	metallo-beta-lactamase	MEM/ETP/IPM	Yes
16047	<i>Klebsiella pneumoniae</i>	ST147	Yes	None	MEM/ETP	Yes
15958	<i>Pseudomonas aeruginosa</i>	ST2935	N/A	None	No	No
15964	<i>Pseudomonas aeruginosa</i>	ST1203	N/A	metallo-beta-lactamase	MEM/IPM	Yes
15965	<i>Pseudomonas aeruginosa</i>	ST773	N/A	metallo-beta-lactamase	MEM/IPM	Yes
15966	<i>Pseudomonas aeruginosa</i>	ST1203	N/A	metallo-beta-lactamase	MEM	Yes
15986	<i>Pseudomonas aeruginosa</i>	ST654	N/A	metallo-beta-lactamase	MEM/IPM	Yes
16014	<i>Pseudomonas aeruginosa</i>	ST244	N/A	None	No	No
16018	<i>Pseudomonas aeruginosa</i>	ST654	N/A	metallo-beta-lactamase	MEM/IPM	Yes
16048	<i>Pseudomonas aeruginosa</i>	ST1555	N/A	None	No	No

**Table S2.** Beta-lactam and fluoroquinolone resistant phenotypes in *E. coli*, *K. pneumoniae* and *P. aeruginosa* isolates collected during Period 2. MLST, multi-locus sequence type; ESBL, extended-spectrum beta-lactamase; AST, antimicrobial susceptibility testing; MEM, meropenem; ETP, ertapenem; IPM, imipenem.

ID	Organism	MLST	AST Phenotype			
			ESBL	Carbapenemase	Carbapenem Non-Susceptible	Fluoroquinolone Resistant
17757	<i>Escherichia coli</i>	Ambiguous (ST506, ST566)	ESBL	No	No	Yes
17758	<i>Escherichia coli</i>	Ambiguous (ST27, ST129)	No	No	No	No
17762	<i>Escherichia coli</i>	Ambiguous (ST27, ST129)	No	No	No	No
17771	<i>Escherichia coli</i>	ST2	No	No	No	No
17772	<i>Escherichia coli</i>	ST2	ESBL	No	No	Yes
17773	<i>Escherichia coli</i>	ST83	No	No	No	No
17775	<i>Escherichia coli</i>	Inconclusive (ST721, ST662, ST472)	ESBL	No	No	Yes
17776	<i>Escherichia coli</i>	Inconclusive (ST466, ST210, ST132)	No	No	No	Yes
17781	<i>Escherichia coli</i>	ST692	ESBL	serine-beta-lactamase	ETP	Yes
17782	<i>Escherichia coli</i>	ST471	ESBL	No	No	Yes
17786	<i>Escherichia coli</i>	ST132	No	No	No	Yes
17789	<i>Escherichia coli</i>	Inconclusive (ST500, ST437)	No	No	No	No
17792	<i>Escherichia coli</i>	ST2632	ESBL	No	No	Yes
17795	<i>Escherichia coli</i>	ST86	ESBL	No	No	Yes
17796	<i>Escherichia coli</i>	Ambiguous (ST566, ST506)	ESBL	No	No	Yes
17803	<i>Escherichia coli</i>	ST2	ESBL	No	No	No
17804	<i>Escherichia coli</i>	ST471	ESBL	No	No	Yes
17862	<i>Escherichia coli</i>	Inconclusive (ST500, ST437)	No	No	No	No
17864	<i>Escherichia coli</i>	ST58	ESBL	No	No	Yes
17759	<i>Klebsiella pneumoniae</i>	ST340	No	Metallo-beta-lactamase	MEM/ETP/IPM	Yes
17765	<i>Klebsiella pneumoniae</i>	ST86	No	No	No	No
17766	<i>Klebsiella pneumoniae</i>	ST20	No	No	No	No
17767	<i>Klebsiella pneumoniae</i>	ST392	No	No	No	Yes
17768	<i>Klebsiella pneumoniae</i>	ST340	No	Metallo-beta-lactamase	MEM/ETP/IPM	Yes
17770	<i>Klebsiella pneumoniae</i>	ST86	No	No	No	No
17785	<i>Klebsiella pneumoniae</i>	ST45	ESBL	No	No	No
17787	<i>Klebsiella pneumoniae</i>	ST2632	No	No	No	No
17790	<i>Klebsiella pneumoniae</i>	ST86	No	No	No	No
17793	<i>Klebsiella pneumoniae</i>	ST661	No	No	No	No
17861	<i>Klebsiella pneumoniae</i>	ST86	No	No	No	No
17863	<i>Klebsiella pneumoniae</i>	ST340	No	Metallo-beta-lactamase	MEM/ETP/IPM	Yes

17760	<i>Pseudomonas aeruginosa</i>	ST274	No	No	MEM/IPM	No
17761	<i>Pseudomonas aeruginosa</i>	Inconclusive (nearest ST244)	No	No	MEM/IPM	No
17763	<i>Pseudomonas aeruginosa</i>	ST773	No	Metallo-beta-lactamase	MEM/IPM	Yes
17777	<i>Pseudomonas aeruginosa</i>	ST773	No	Metallo-beta-lactamase	MEM/IPM	Yes
17778	<i>Pseudomonas aeruginosa</i>	ST773	No	Metallo-beta-lactamase	MEM/IPM	Yes
17779	<i>Pseudomonas aeruginosa</i>	ST773	No	Metallo-beta-lactamase	MEM/IMP	Yes
17791	<i>Pseudomonas aeruginosa</i>	ST773	No	Metallo-beta-lactamase	MEM/IMP	Yes
17794	<i>Pseudomonas aeruginosa</i>	ST773	No	Metallo-beta-lactamase	MEM/IMP	Yes