

Development of a MALDI-TOF MS-based screening panel for accelerated differential detection of carbapenemases in *Enterobacterales* using the direct-on-target microdroplet growth assay

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Table S1. Resistance mechanisms detected by BMD, CDT, DOT-MGA (3 and 4 hours of incubation) and PCR in 20 clinical *Enterobacterales* isolates.

Isolate	BMD	CDT	DOT-MGA		PCR	
			3 h	4 h	Result	Detected gene(s)
<i>K. pneumoniae</i>	OXA	OXA	KPC	OXA	OXA	OXA-48/ CTX-M-9
<i>K. pneumoniae</i>	-	KPC/OXA	-	-	- *	CTX-M-15
<i>E. aerogenes</i>	KPC/AmpC	KPC/AmpC/ OXA	-	-	-	-
<i>K. pneumoniae</i>	MBLOXA	MBL/OXA	MBL	MBL	MBL*	NDM/ CTX-M-15
<i>K. pneumoniae</i>	-	OXA	-	-	- *	CTX-M-15
<i>K. pneumoniae</i>	-	OXA	OXA	OXA	OXA	OXA-48
<i>K. pneumoniae</i>	OXA	OXA	OXA	OXA	OXA*	OXA-48/ CTX-M-9
<i>P. mirabilis</i>	-	-	-	-	-	-
<i>K. pneumoniae</i>	-	KPC	-	-	- *	CTX-M-15
<i>K. oxytoca</i>	MBL/OXA	-	-	MBL	MBL	VIM
<i>E. cloacae</i>	AmpC	KPC/AmpC	AmpC	AmpC	AmpC*	ACT/MIR/ CTX-M-9
<i>E. aerogenes</i>	KPC/AmpC	KPC	AmpC	AmpC	-	-
<i>E. coli</i>	MBL/OXA	MBL/OXA	-	MBL/OXA/ A	MBL/OXA/ AmpC	OXA-48/NDM/ CMY-2
<i>K. pneumoniae</i>	OXA	OXA	-	OXA	OXA*	OXA-48/ CTX-M-15
<i>E. cloacae</i>	AmpC	KPC/AmpC/ OXA	-	AmpC	-	-
<i>K. pneumoniae</i>	-	OXA	-	-	- *	CTX-M-15
<i>K. pneumoniae</i>	OXA	OXA	OXA	OXA	OXA*	OXA-48/ CTX-M-15
<i>K. pneumoniae</i>	OXA	OXA	OXA	OXA	OXA*	OXA-48/ CTX-M-15
<i>K. pneumoniae</i>	-	-	MBL	MBL	AmpC/MBL*	NDM/CMY-2
<i>P. mirabilis</i>	-	-	-	-	-	-

- : Negative result.

* : Additional detection of ESBL production.

Table S2. Genes detected by the PCR microarray.

Carbapenemases			ESBL			Minor ESBL	AmpC
GES*	OXA-24	CTX-M-1 group	CTX-M-9 group	TEM wt	SHV wt	BEL	ACC
GIM	OXA-48	CTX-M-1 subgroup	CTX-M-15 subgroup	TEM 104K	SHV 238A	GES**	ACT/MIR
IMP	OXA-58	CTX-M-2 group	CTX-M-25 group	TEM 164C	SHV 238S	PER	CMY-1/ MOX
KPC	VIM	CTX-M-3 subgroup	CTX-M-32 subgroup	TEM 164H	SHV 240K	VEB	CMY-2
NDM	SPM	CTX-M-8 group		TEM 164S			DHA
OXA-23				TEM 238S			FOX

*GES, enzymes with carbapenemase activity (2, 4-6, 13-15, 17, 18, 20, 21);

**GES, enzymes with ESBL activity (1, 3, 7-12, 16, 19, 22).