

Table S3. Minimum inhibitory concentration (MIC). Inhibition zone diameter (IZD) and carbapenem resistance (CR) mechanisms of isolates obtained from companion animals and contexts associated with their presence.

First author	Sample origin	CR microorganism	Genetic CR mechanism*	Obtained isolates (n)	Isolates evaluated susceptibility (n)	IMPENEM		ERTAPENEM		MEROPEM		DORIPENEM		Susceptibility testing	Out-off points	Genetic location	Phenotypic resistance to other classes of antimicrobials	Resistance definition	Molecular technique CR detection	Carbapenemase gene family analyzed by PCR	COUNTRY
						n	%	MIC (mg/mL)/ IZD (mm)	n	%	MIC (mg/mL)/ IZD (mm)	n	%								
Li et al. [19]	Dogs	<i>Escherichia coli</i>	NDM-5	2	2	0	0	0	0.5	NE	2	100	4-8	NE	EUCAST. 2018	PLASMID	AMC. CIP. CTX. FOS. GEN. TET. TZP	PCR + SGC	IMP. KPC. NDM. OXA-48 like. VIM	China	
Nigg et al. [20]	Dogs and cats	<i>E. coli</i>	OXA-181 (OXA-48 like)	21	21	0	0	0.5-1	0.25-1	NE	0	0	0.25-1	NE	EUCAST. 2019	PLASMID	AMP. CAZ. CIP. CTX. FEP. NAL. TET	PCR + SGC	OXA-48 like	Switzerland	
Wang et al. [21]	Dogs and cats	<i>E. coli</i>	NDM-5	4	4	4	100	4-8	NE	NE	NE	NE	NE	CLSI. 2018	PLASMID	AMK. AMP. CAZ. CIP. CTX. FOS. GEN. SXT. TET	PCR	AIM. BIC. DIM. SIM. IMP. KPC. NDM. OXA-48 like. SHV. SPM. VIM	China		
		<i>Enterobacter cloacae</i>		1	1	1	100	2							PLASMID	AMP. CAZ. CTX. FFC. GEN. SXT. TET					
		<i>Chrobacter freundii</i>		1	1	1	100	8							PLASMID	AMK. AMP. CAZ. CIP. CTX. GEN. SXT					
Hong et al. [22]	Dogs and cats	<i>E. coli</i>	NDM-5	2	2	2	100	4-16	2	100	16->32	2	100	4-32	NE	PLASMID	ATM. CAZ. CIP. CTX. FEP. FOX. GEN. PIP. SXT	PCR	GES. IMP. KPC. NDM. OXA-48 like. VIM	South Korea	
Valat et al. [23]	Dogs	<i>E. coli</i>	OXA-48	1	1	NE	NE	NA	NE	NE	NA	NE	NE	CA-SFM 2019	PLASMID	STR. SUL. TET. TMP	PCR + SGC	NS	France		
Reynolds et al. [24]	Dogs	<i>E. coli</i>	NDM-5	1	1	1	100	4	NE	1	100	4	NE	EUCAST. 2017	PLASMID	AMC. AMP. ATM. CEF. CIP. CPX. FEP. FOX. LEV. SXT. TOC. TZP	PCR + SGC	GES. IMP. KPC. NDM. OXA-48 like. VIM	United Kingdom		
Pulss et al. [25]	Dogs and cats	<i>Klebsiella pneumoniae/ Klebsiella oxytoca</i>	OXA-48	82	87 ⁰	26	29.9	NR	NE	NE	NE	NE	NE	CLSI. 2017	PLASMID	AMC. AMP. CHL. CN. CPX. CR. ENR. GEN. MB. NIT. PIP. SXT. TET. TOB. XNL	PCR	KPC. NDM. OXA-48 like. VIM	Germany		
		<i>E. cloacae</i>		28	28 ⁰	22	78.6	NR							PLASMID	AMC. AMP. CHL. CN. CPX. CR. ENR. GEN. MB. NIT. PIP. SXT. TET. TOB. XNL					
		<i>E. coli</i>		22	22 ⁰	0	0	NR							PLASMID	AMC. AMP. CHL. CN. CPX. CR. ENR. GEN. MB. PIP. SXT. TET. TOB. XNL					
Brilhante et al. [26]	Dogs	<i>E. coli</i>	OXA-181 (OXA-48 like)	2	2	NE	NE	1	NE	NE	100	1	NE	CLSI. 2018	PLASMID	AMP. CAZ. CHL. CIP. CTX. FEP. SMX. TEI. TMP	SGC	NA		Portugal	
Yousfi et al. [27]	Dogs and cats	<i>E. coli</i>	OXA-48	4	4	0	0	0.38-0.75	4	100	1.5-2	0	0	0.38-0.5	0	0	0.19-0.25	E test			Algeria
				1	1	1	100	>32	1	100	>32	1	100	>32	1	100	>32	1	100	24	

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Table S3. Continued

First author	Sample origin	OR microorganism	Genetic CR mechanism ^a	Obtained isolates (n)	Isolates evaluated susceptibility (n)	IMIPENEM		ERTAPENEM		MEROPEM		DORIPENEM		Susceptibility testing	Cut-off points	Genetic location	Phenotypic resistance to other classes of antimicrobials	Resistance definition	Molecular technique CR detection	Carbapenemase gene family analyzed by PCR	COUNTRY	
						n	%	n	%	n	%	n	%									MIC (mg/mL)/ IZD (mm)
Yousfi et al. [28]	Dogs	<i>E. coli</i>	OXA-48	2	2	0	0	2	100	NA	NE	NE	NA	Disk diffusion	EUCAST: 2016	PLASMID	AMC, CAZ, CIP, CTX, ENR, FEP, NAL, SXT, TIC, TZP	NR	PCR	*IMP KPC, NDM-1, OXA-23 like, OXA-58 like, OXA-48 like, VIM	Algeria	
	Cats	<i>K. pneumoniae</i>		2	2	0	0	2	100						PLASMID	AMC, CAZ, CIP, CTX, ENR, FEP, NAL, SXT, TIC, TZP						
	Dogs	<i>E. cloacae</i>		2	2	0	0	2	100						PLASMID	AMC, CAZ, CIP, CTX, ENR, FEP, NAL, SXT, TIC, TZP						
Stolle et al. [29]	Dogs	<i>K. pneumoniae</i>	OXA-48	5	5	5	100	3	60	0-25 mm	1	20	8	Broth microdilution (VITEK®2)	CLSI: 2011	PLASMID	AMP, CIP, CN, ENR, FEP, FOX, GEN, LEV, MB, PIP, SXT, TET, TIC, TOB, XNL	NR	PCR	IMP KPC, NDM-1, OXA-48 like, VIM	Germany	
		<i>E. coli</i>		3	3	0	0	1	33	21 mm	0	0	≤0.25			PLASMID	AMP, CHL, CIP, CN, CPX, CR, CTX, CXM, ENR, FEP, FOX, GEN, LEV, MB, PIP, SXT, TET, TIC, TOB, XNL					
Marti et al. [30]	Dogs	<i>K. pneumoniae</i>	OXA-48	1	1	0	0	1	100	1	0	0	0.75	E test	EUCAST: 2018	PLASMID	AMC, AMOX, PIP, TOC, TIC	NR	PCR + SGC	IMP KPC, NDM OXA-48 like, VIM	Algeria	
Cui et al. [31]	Dogs	<i>E. coli</i>	NDM-1	1	1	1	100	1	100	256	1	100	64	Agar dilution	CLSI: 2015	PLASMID	CAZ, CIP, CTX, FOS, GEN, PIP, TET	MDR	PCR	DM, GES, GIM, IMI, IMP, KPC, NDM, NMC, OXA-23 like, OXA-24 like, OXA-48 like, OXA-51 like, OXA-58 like, SIM, SME, SPM, VIM	China	
Hong et al. [32]	Dogs	<i>E. coli</i>	NDM-5	4	4	4	100	16	NE	4	100	8-16	NE	Agar dilution	CLSI: 2015	PLASMID	ATM, CAZ, CIP, CTX, FEP, FOX, GEN, STX	MDR	PCR + SGC	IMP KPC, NDM-1, OXA-48 like, VIM	South Korea	
González-Torralba et al. [33]	Dogs	<i>K. pneumoniae</i>	VIM-1	1	1	1	100	4	1	100	<2	1	100	Broth microdilution (Wider System)	EUCAST: 2012	PLASMID	AMC, AMOX, CAZ, CFA, CFC, CTX, CXM, FEP, FOS, FOX, SXT, TOB, TZP	NR	PCR	IMP KPC, NDM OXA-48 like, VIM	Spain	
Górriz et al. [34]	Dogs	<i>E. coli</i>	NDM-5	4	4	NE	NE	NE	4	100	NA (≤22 mm)	NE	NE	Disk diffusion (VET01-A4)	CLSI: 2013 (VET01-A4)	PLASMID	AMC, AMK, AMP, CPX, ENR, GEN, SXT	MDR	PCR + SGC	GES, IMI, IMP, KPC, NDM, OXA-48 like, VIM	Finland	
Abraham et al. [35]	Cats	<i>Salmonella enterica serovar. Typhimurium</i>	IMP-4	4	4	NE	NE	NE	4	100	NR	NE	NE	Broth microdilution (VITEK®2)	CLSI: 2013 (VET01-A4)	PLASMID	AMC, AMP, CAZ, CEF, GRC, FOX, SXT, TAZ, TOC, TMP, TOB	MDR	PCR + SGC	IMP	Australia	
Liu et al. [36]	Dogs and cats	<i>E. coli</i>	OXA-48	13	13	NE	NE	NE	11	84.6	NR	NE	NE	Broth microdilution (Sensititre System TM)	CLSI: 2013 (VET01-A4)	PLASMID	AMC, AMK, AMP, CAZ, CR, CHL, CIP, CPX, CTX, DD, ENR, FOX, GEN, SXT, TOC, XNL	MDR	PCR	KPC, NDM, OXA-48 like	United States	
Schmiedel et al. [37]	Dogs and cats	<i>K. pneumoniae</i>	OXA-48	14	NR	NR	NR	NR	NR	NR	NE	NE	NE	Broth microdilution (VITEK®2) / E test	CLSI: 2012	NR	NR	MDR	PCR	OXA-48 like	Germany	
Brilhante et al. [38]	Dogs and cats	<i>K. pneumoniae</i>	OXA-48	16	16	0	0	0.52	16	100	2-2	0	0	Broth microdilution (Sensititre System TM)	EUCAST: 2020	PLASMID	AMP, CAZ, CHL, CIP, CTX, GEN, NAL, SMX, TET, TGC, TMP	MDR	PCR + SGC	OXA-48 like	Switzerland	

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Table S3. Continued

First author	Sample origin	CR microorganism	Genetic CR mechanism ^a	Obtained isolates (n)	Isolates evaluated susceptibility (n)	IMPENEM		ERTAPENEM		MEROPEM		DORIPENEM		Susceptibility testing	Cut-off points	Genetic location	Phenotypic resistance to other classes of antimicrobials	Resistance definition	Molecular technique CR detection	Carbapenemase gene family analyzed by PCR	COUNTRY
						n	%	MIC (mg/mL)/ IZD (mm)	n	%	MIC (mg/mL)/ IZD (mm)	n	%								
Liu et al. [39]	Dogs	<i>E. coli</i>	OXA-48	8	8	4	50	NR	NE	4	50	NR	NE	Broth microdilution	CLSI 2013	NR	AMC, AMP, CAZ, CEF, CIP, CHL, CPX, CRO, CTX, DO, ENR, FOX, GEN, PRA, SXT	PCR	KPC, NDM, OXA-48 like	China	
Dazio et al. [40]	Dogs and cats	<i>E. coli</i>	NDM-5	2	2	NE	NE	NE	NE	2	100	16->16	NE	Broth microdilution	EUCAST 2019	NR	AMP, CHL, CTX, SMX, TET, TMP	Microarrays + PCR + SGC	OXA-48 like	Switzerland	
			OXA-48	1	1	0	0	0.25									AMP, CHL, CTX, SMX, TET, TMP				
			OXA-181 (OXA-48 like)	23	23	0	0	≤0.03-≤2									AMP, CAZ, CHL, CIP, CTX, SMX, TET, TMP				
		<i>K. pneumoniae</i>	OXA-48	1	1	1	100	0.9 ^b									AMP, AZI, CAZ, CHL, CIP, CTX, GEN, NAL, SMX, TET, TMP				
Daniels et al. [41]	Dogs	<i>E. xiangfangensis</i>	KPC-4	2	2	0	0	≤1	2	100	1-2	0	0	Broth microdilution (Sensititre System TM)/ E test	CLSI 2013 (VET01-A4)	PLASMID	AMC, AMP, CAZ, CEF, CPX, DO, SMX, TET, TMP	SGC	NA	United States	
Sellera et al. [42]	Dogs	<i>K. pneumoniae</i>	KPC-2	1	1	1	100	>32	1	100	NR	1	100	Disk diffusion/ E test	CLSI 2020	PLASMID	AMC, AMP, ATM, CAZ, CHL, CIP, CRO, CTX, ENR, FEP, FOX, GEN, NAL, SXT, XNL	SGC	NA	Brazil	
Petehans et al. [43]	Dogs	<i>E. coli</i>	NDM-5	1	1	NE	NE	100	NR	1	100	NR	NE	Disk diffusion/ E test	CLSI (NR)	NR	AMC, AMP, AZI, CEF, CHL, CIP, CTX, FEP, GEN, NAL, SXT, TET	SGC	NA	Switzerland	
Khalifa et al. [44]	Dogs and cats	<i>E. hormaechei</i>	VIM-4	5	5	3	60	4	NE	5	100	4-8	0	NR	CLSI 2012	PLASMID	ATM, CAZ, FOS, GEN, LEV, PIP, TOB, TZP	PCR + SGC	NS	Egypt	
		<i>K. pneumoniae</i>	OXA-48	1	1	1	100	4		1	100	8	0	≤1		PLASMID	CIP, FOS, LEV, MIN, PIP, TZP				
		<i>E. coli</i>	OXA-244 (OXA-48 like)	1	1	1	100	2		1	100	2	0	≤1		PLASMID	ATM, CAZ, FEP, MIN, PIP, TZP				
Hong et al. [45]	Dogs	<i>E. coli</i>	NDM-5	4	155 ^b	4	3	NA	4	3	NA	4	3	NA	CLSI 2018	NR	GES, IMP, KPC, NDM, OXA-48 like, VIM	PCR		South Korea	
Pruthivishree et al. [46]	Dogs	<i>E. coli</i>	NDM-1	1	1	1	100	>256	1	100	>32	1	100	>256	CLSI 2015	NR	AMC, AMP, AMOX, ATM, CAZ, CFA, CFC, CFM, CFP, CFX, CHL, CIP, CN, COL, COT, CRO, CTX, FEP, FOS, FOX, FTP, GAT, GEN, MXL, NIT, NOR, OFL, PIP, POL, SXT, TET, TOB, TZP, VAN	PCR	IMP, KPC, NDM, OXA-48 like, VIM	India	
Shaheen et al. [47]	Dogs and cats	<i>E. coli</i>	NDM-1	6	6	NE	NE	NE	NE	2	33.3	4-16	NE	Broth microdilution (Sensititre System TM)	CLSI 2012	CHROMOSOME/ PLASMID	AMC, AMP, CEF, CFA, CFC, CFX, CTX, DO, ENR, FOX, GEN, SXT	PCR	KPC, NDM, AIM, GIM, SIM, DIM, IMP, VIM, SPM, OXA-48	United States	
Melo et al. [48]	Dogs	<i>E. coli</i>	OXA-48	1	1	0	0	1.5	1	100	0.75	0	0	E test	NR	PLASMID	BL (NS), AZI, CIP, GEN, SMX, TET, TMP	PCR	NS	France	
Alba et al. [49]	Dogs	<i>E. coli</i>	NDM-5	1	1	1	100	>16	1	100	>2	1	100	>16	EUCAST 2020	PLASMID	BL (NS), AZI, CIP, GEN, SMX, TET, TMP	PCR + SGC	IMP, KPC, NDM, OXA-48 like, VIM	Italy	
Wang et al. [53]	Dogs	<i>P. aeruginosa</i>	IMP-45	1	1	1	100	32	1	100	1024	1	100	256	CLSI 2014	CHROMOSOME	AMC, AMP, CAZ, CHL, CIP, CTX, GEN, POL	PCR	AIM, GM, IMP, NDM, SIM, SPM, VIM	China	

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Table S3. Continued

First author	Sample origin	CR microorganism	Genetic CR mechanism ^e	Obtained isolates (n)	Isolates evaluated susceptibility (n)	IMIPENEM		ERTAPENEM		MEROPEM		DORIPENEM		Susceptibility testing	Cut-off points	Genetic location	Phenotypic resistance to other classes of antimicrobials	Resistance definition	Molecular technique CR detection	Carbapenemase gene family analyzed by PCR	COUNTRY
						n	%	n	%	n	%	n	%								
Fernandes et al. [54]	Dogs	<i>P. aeruginosa</i>	VIM-2	3	3	3	100	>32	NE	3	100	>32	NE	NR	NR	CHROMOSOME	AMC, AMK, CAZ, CHL, CIP, CRO, CTX, FEP, FOX, GEN, NAL, STX, TET, TIC, TZP	MDR	SGC	NA	Brazil
Ewers et al. [55]	Dogs and cats	<i>A. baumannii</i>	OXA-23	3	3	3	100	>16	NE	3	100	NR	NE	Broth microdilution (VITEK®2)	CLSI, 2016	PLASMID	CAZ, CIP, CN, CPX, CTX, CXM, ENR, FOS, GEN, LEV, MB, PIP, SAM, SXT, TET, TGC, TZP	NR	PCR + SGC	IMP, KPC, NDM, OXA-23 like, OXA-24/40 like, OXA-48 like, OXA-58 like, VIM	Germany
Hérivaux et al. [56]	Dogs	<i>A. baumannii</i>	OXA-23	2	2	2	100	>32	NE	2	100	>32	2	100	>32	NR	PEN (NS), PEN-IH (NS), AMMG (NS), CIP, DO, SXT	PCR	PCR	NDM, OXA-23 like, OXA-24/40 like, OXA-58 like	France
Ewers et al. [57]	Cats	<i>A. baumannii</i>	OXA-23	1	1	1	100	>16	NE	NE	NE	NE	NE	Broth microdilution (VITEK®2)	NR	PLASMID	CR, ENR, MB, PIP, SXT, TET	NR	SGC	NA	Germany
Pomba et al. [58]	Cats	<i>A. baumannii</i>	OXA-23	1	1	1	100	8	NE	1	100	8	NE	Broth microdilution (Sensititre System TM)	CLSI, 2013	CHROMOSOME	CAZ, CFA, CFC, CHL, CIP, CPX, CRO, CTX, FEP, SMX, STR, TET, TMP, TZP	MDR	Microarrays + PCR	OXA-23 like, OXA-51 like	Portugal
Gentili et al. [59]	Dogs	<i>A. radfioresistens</i>	NDM-1	1	1	1	100	>32	NE	1	100	>32	NE	E test	EUCAST, 2016	NR	CAZ, CIP, CTX, FEP, SXT, TET	PCR	PCR	IMP, KPC, L1, L2, NDM, OXA-23 like, OXA-48 like, VIM, oprD	Italy
	Dogs and cats	<i>A. baumannii</i>	OXA-23	5	5	5	100	16->32	NE	5	100	>32	NE	E test	NR	PLASMID	AMK, CAZ, CIP, CTX, FEP, GEN, SAM, SXT, TET	XDR	SGC	NA	United States
	Dogs	<i>P. aeruginosa</i>	Loss of OprD	4	4	4	100	16	NE	3	75	4-8	NE	E test	NR	PLASMID	AMK, CAZ, CIP, CTX, FEP, GEN, PIP, SXT, TOB, TZP	MDR	PCR	NS	Serbia
	Dogs and cats	<i>Stenotrophomonas maltophilia</i>	L1 ^b	2	2	2	100	>32	NE	2	100	>32	NE	E test	NR	PLASMID	AMK, CAZ, CIP, CIP-FEP, GEN, MB, MOD, NIT, SXT, TET, TOB, XNL	MDR	PCR + SGC	IMP, NDM, OXA-23 like, OXA-40 like, OXA-58 like, VIM	Germany
	Dogs	<i>E. coli</i>	NDM-5	1	1	1	100	4	NE	NE	NE	NE	NE	E test	NR	PLASMID	CHL, SXT, TET, AMMG (NS), BL (NS), FOS (NS)	MDR	SGC	NA	United States
Hyun et al. [61]	Dogs	<i>P. aeruginosa</i>	VIM-2	10	10	10	100	64-256	NE	10	100	32-64	NE	Agar dilution	CLSI, 2014	INTEGRON (Class I)	AMK, ATM, CAZ, CIP-FEP, GEN, OHL, PIP, TOB, TZP	MDR	PCR	GES, IMP, KPC, NDM, VIM	South Korea
Misic et al. [62]	Dogs	<i>A. baumannii</i>	OXA-72 (OXA-40 like)	1	1	1	100	>16	NE	1	100	>16	NE	E test	CLSI, 2016	PLASMID	AMK, CAZ, CIP, COL, CTX, FEP, GEN, PIP, SXT, TOB, TZP	MDR	PCR	NS	Serbia
Klotz et al. [63]	Dogs and cats	<i>A. pittii</i>	OXA-58 (OXA-58 like)	4	4	0	0	8	NE	0	0	NR	NE	Broth microdilution (VITEK®2)	EUCAST, 2016	PLASMID	CAZ, CIP, CPX, CR, ENR, FEP, GEN, MB, MOD, NIT, SXT, TET, TOB, XNL	NR	PCR + SGC	IMP, NDM, OXA-23 like, OXA-40 like, OXA-58 like, VIM	Germany
Lupo et al. [64]	Dogs and cats	<i>A. baumannii</i>	OXA-23	7	7	7	100	>32	NE	7	100	>32	NE	NR	CA-SFM/ EUCAST, 2016	CHROMOSOME	CIP, CTX, FEP, GEN, NET, SXT	MDR	PCR	GES, IMP, NDM, OXA-143 like, OXA-23 like, OXA-24/40 like, OXA-58 like, SIM, VIM	France
Kimura et al. [65]	Dogs and cats	<i>A. radfioresistens</i>	IMP-1	2	2	2	100	>32	NE	2	100	>32	NE	Broth microdilution	CLSI, 2015	NR	CAZ, CIP, FEP, LEV, PIP	NR	SGC	NA	Japan
Taj et al. [66]	Cats	<i>A. baumannii</i>	OXA-23	1	1	1	100	16	NE	1	100	32	NE	Broth microdilution	CLSI, 2015	NR	AMK, CAZ, CIP, CRO, CTX, DO, FEP, GEN, SAM, SXT, TOB, TZP	XDR	PCR	GIM, IMP, NDM, OXA-23 like, OXA-24/40 like, OXA-51 like, OXA-58 like, SIM, VIM	Pakistan

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						n	%	MIC (mg/mL)/ IZD (mm)	n	%	MIC (mg/mL)/ IZD (mm)	n	%								
Bandyopadhyay et al. [67]	Dogs	<i>E. coli</i>	NDM-5	16	16	100	>2	NE	16	100	NA (≤ 22 mm)	NE	NA	Disk diffusion/E test	CLSI (NR)	PLASMID	AMP, ATM, CAZ, CIP, COL, CPX, CRO, ENR, GEN, NAL, TET	MDR	PCR	KPC, NDM, OXA-48 like, VIM	India
Oh et al. [68]	Dogs	<i>E. coli</i>	NDM-5	4	4	100	8	NE	4	100	> 8	NE	Broth microdilution (Sensititre System TM)	CLSI, 2017	PLASMID	AMC, AMP, CAZ, CFM, CIP, CTX, FEP, FOX, GEN, SAM, SXT	MDR	PCR	IMP, KPC, NDM, OXA-48 like, VIM	South Korea	
Cole et al. [69]	Dogs and cats	<i>E. coli</i>	NDM-5	7	NA	NE	NE	NE	NE	NE	NE	NE	NA	NA	PLASMID	NA	NR	SGC	NA	United States	
Brihante et al. [38]	Veterinary surfaces	<i>K. pneumoniae</i>	OXA-48	15	15	0	0.52	15	100	2-2	0	0.52	Broth microdilution (Sensititre System TM)	EUCAST, 2020	PLASMID	AMP, CAZ, CHL, CIP, CTX, GEN, NAL, SMX, TET, TGC, TMP	MDR	PCR + SGC	OXA-48 like	Switzerland	
Seiffert et al. [50]	Pet food ^b	Enterobacterias (undetermined species)	OXA-48	3	3	NE	NE	NE	NE	NE	NE	NE	NA	NA	PLASMID	NA	NR	PCR	IMP, NDM, OXA-48 like, VIM	Switzerland	
Ramadan et al. [51]	Veterinary surfaces	<i>E. coli</i>	NDM-5	7	7	NR ^c	NR ^c	NR ^c	NR ^c	NR ^c	NR ^c	NR ^c	Broth microdilution (Sensititre System TM)	CLSI, 2018	PLASMID	AMP, ATM, CAZ, CEF, CIP, CRO, FEP, GEN, LEV, MIN, PIP, SAM, SXT, TCC, TET, TOB, TZP	MDR	PCR + SGC	IMP, KPC, NDM, OXA-48 like, VIM	Egypt	
Schmid et al. [52]	Veterinary surfaces	<i>E. coli</i>	OXA-48	2	2	NE	NE	NE	2	100	0.25-0.5 ^d	NE	Broth microdilution (Sensititre System TM)	EUCAST, 2019	NR	AMP, CAZ, CHL, CIP, CTX, NAL, SMX, TET, TMP	MDR	Microarrays	NA	Switzerland	
			OXA-181 (OXA-48 like)	1	1	100	0.9 ^d		1	100	0.9 ^d						AMP, CAZ, CHL, CIP, CTX, NAL, TET	MDR			
		<i>K. pneumoniae</i>	OXA-48	18	18	100	1 ^d		18	100	1 ^d						AMP, AZI, CAZ, CHL, CIP, CTX, NAL, SMX	MDR			
		<i>E. cloacae</i>	OXA-48	2	2	100	0.25-0.5 ^d		2	100	0.25-0.5 ^d						AMP, CTX, NAL, SMX, TET	NR			
Fernandes et al. [54]	Household surfaces ^b	<i>P. aeruginosa</i>	VIM-2	3	1 ^b	100	>32	NE	1	100	>32	NE	NR	NR	CHROMOSOME	AMC, AMK, CAZ, CTX, FEP, FOX, GEN, NAL, SXT, TET, TIC, TZP	MDR	SGC	NA	Brazil	

NE, not evaluated; NR, not reported; NS, not specified; CA-SFM, Antibiogram Committee-French Society for Microbiology; AMC, amoxicillin-clavulanate; AMK, amikacin; AMNG, aminoglycosides; AMOX, amoxicillin; AMP, ampicillin; ATM, aztreonam; AZI, azithromycin; BL, betalactams; CAZ, ceftazidime; CEF, cephalothin; CIP, ciprofloxacin; CLO, cloxacillin; CN, cephalaxin; COL, colistin; CPX, cefepodoxime; CR, ceftazidime/clavulanic acid; CFC, ceftazidime/clavulanic acid; CFM, cefixime; CFP, cefoperazone; CHL, chloramphenicol; CIP, ciprofloxacin; CLO, cloxacillin; CRO, ceftroloxime; CR, ceftazidime; CTX, cefotaxime; CXM, cefturoxime; DO, doxycycline; ENR, enrofloxacin; FEP, cefepime; FFC, florfenicol; FOS, fosfomicin; FOX, cefoxitin; FQS, fluoroquinolones; GEN, gentamicin; LEV, levofloxacin; MB, marbofloxacin; MIN, minocycline; MOX, moxifloxacin; NAL, nalidixic acid; NET, netilmicin; NIT, nitrofurantoin; OFL, ofloxacin; PEN-IH, penicillins/ β -lactamase inhibitors; POL, polymyxin B; PRA, pradofloxacin; PIP, piperacillin; SAM, ampicillin/subactam; SMX, sulfamethoxazole; STR, streptomycin; SUL, sulfonamides; SXT, sulfamethoxazole/trimethoprim; TCC, ticarcillin-clavulanate; TGC, tigecycline; TEM, temocillin; TET, tetracycline; TIC, ticarcillin; TMP, trimethoprim; TZP, piperacillin-tazobactam; XNL, ceftiofur.

^aMixed wet pet food with different flavors. ^bHome surfaces (sofa, balcony, water cooler). ^cCarbapenemases production or porins loss. ^dThe authors determined that the loss of the oprD porin was caused by different mutations within the gene that caused a premature stop codon as a consequence of a frameshift, or a nonsense mutation. ^eChromosome-encoded intrinsic metallo- β -lactamase L1 of *S. maltophilia* species. ^fCorresponds to the 137 total isolates of the three bacterial species, including 4 additional *K. pneumoniae* obtained from guinea pig, rat, mouse and rabbit. The authors do not discriminate susceptibility pattern by animal species. ^gCorresponds to the 155 total isolates of *E. coli* from canines. The authors did not discriminate the susceptibility pattern of the isolates with carbapenemases. ^hThe authors report 3 carbapenem-resistant isolates from 3 locations in the home (couch, balcony, water cooler), but only present in the text the susceptibility testing of 1 isolate obtained from the couch. ⁱThe authors do not specify to which carbapenem the isolates presented are resistant. ^jFor carbapenemases screening. EUCAST 2019 recommends a meropenem detection limit of >0.125 mg/L.