

SUPPLEMENTAL MATERIAL REQ-2021-019

Table S1. Distribution of the most common Gram-negative organisms collected in intrabdominal (IAI), urinary tract (UTI), respiratory tract (RTI) and blood stream (BSI) infections in Spain in the SMART Study (2016-2018)

Microrganisms	IAI	UTI	RTI	BSI^a
	No. isolates (%)	No. isolates (%)	No. isolates (%)	No. isolates (%)
<i>Escherichia coli</i>	841 (49.3)	688 (54.9)	348 (16.7)	149 (50.0)
<i>Klebsiella pneumoniae</i>	203 (11.9)	240 (19.1)	274 (13.1)	46 (15.4)
<i>Klebsiella oxytoca</i>	79 (4.6)	26 (2.0)	64 (3.0)	8 (2.6)
<i>Proteus mirabilis</i>	53 (3.1)	93 (7.4)	56 (2.6)	16 (5.3)
<i>Enterobacter cloacae</i>	92 (5.3)	23 (1.8)	114 (5.4)	11 (3.6)
<i>Citrobacter freundii</i>	33 (1.9)	15 (1.1)	15 (0.7)	5 (1.6)
<i>Morganella morganii</i>	31 (1.8)	24 (1.9)	32 (1.5)	4 (1.3)
<i>Serratia marcescens</i>	31 (1.8)	7 (0.5)	128 (6.1)	4 (1.3)
Other <i>Enterobacteriales</i>	143 (8.3)	48 (3.8)	189 (9.0)	18 (6.0)
<i>Pseudomonas aeruginosa</i>	159 (9.3)	71 (5.6)	665 (32.0)	27 (9.0)
<i>Stenotrophomonas maltophilia</i>	17 (0.9)	2 (0.1)	127 (6.1)	1 (0.3)
Other Gram-negative bacilli	23 (1.3)	16 (1.2)	66 (3.1)	9 (3.0)
TOTAL	1709	1253	2078	298

^a Only 2018

Table S2. Molecular characterization of extended-spectrum beta-lactamases and carbapenemases and distribution regarding ceftolozane-tazobactam MIC values in *E. coli* and *K. pneumoniae* isolates

Ceftolozane-tazobactam MIC (mg/L)	<i>E. coli</i> (n=80)		<i>K. pneumoniae</i> (n=160)	
	No.	Enzymes (no. of isolates)	No.	Enzymes (no. of isolates)
0.12/4	2	SHV-12 (1), CTX-M-27 (1)	0	--
0.25/4	28	CMY-2 (1), SHV-12 (4), CTX-M-1 (1), CTX-M-14 (1), CTX-M-15 (2), CTX-M-27 (3), OXA-48 (2) CTX-M-174+ KPC-3 (1)	4	None (2), CTX-M-15 (2)
0.5/4	27	None (6), CMY-2 (2), DHA-4 (1), CTX-M-14 (2), CTX-M-15 (10), CTX-M-27 (3), OXA-48 (3)	6	None (3), CTX-M-15 (2), OXA-48 (1)
1/4	10	None (3), CMY-2 (1), CTX-M-14 (1), CTX-M-15 (3), CTX-M-TYPE (1), OXA-48 (1)	13	SHV-2 (2), CTX-M-10 (1), CTX-M-15 (8), OXA-48 (2)
2/4	6	None (1), CMY-2 (2), CTX-M-15 (1), CTX-M-55+CMY-2 (1), SHV-12+ OXA-48 (1)	12	None (2), SHV-2 (1), SHV-12 (1), CTX-M-15 (4), OXA-48 (1) SHV-12+CTX-M-9 (2), SHV-12+DHA-1 (1)
4/4	8	None (1), CMY-2 (2), AAC (1), CTX-M-14 (1), CTX-M-15 (1) CTX-M-15+ OXA-48 (2)	17	None (2), SHV-2 (1), SHV-12 (1), CTX-M-15 (7), OXA-48 (1) SHV-12+CTX-M-TYPE (1), CTX-M-TYPE+ OXA-48 (1), CTX-M-15+ OXA-48 (3)
8/4	1	DHA-1 (1)	13	SHV-12 (1), CTX-M-15 (2) CTX-M-9+OXA-48 (1), CTX-M-15+ OXA-48 (8) SHV-12+CTX-M-TYPE+ OXA-48 (1)
>8/4	8	CMY-2 (2), CTX-M-15 (1), CTX-M-TYPE (1) CTX-M-15+CMY-42 (1), CTX-M-15+DHA-1 (1), CTX-M-15+ VIM-1 (1) CTX-M-TYPE+CMY-TYPE+ KPC-TYPE (1)	94	CTX-M-15 (9), KPC-3 (2), VIM-1 (2) SHV-12+CTX-M-9 (3), SHV-12+ OXA-48 (5), SHV-134+ OXA-48 (1), CTX-M-15+ KPC-3 (3), DHA-1+ VIM-1 (1), CTX-M-15+ NDM-1 (2), CTX-M-15+ OXA-48 (47) SHV-2+CTX-M-TYPE+ OXA-48 (1), SHV-12+CTX-M-9+ OXA-48 (3), SHV-12+CTX-M-TYPE+ OXA-48 (12), SHV-ESBL+CTX-M-TYPE+ VIM-1 (1), CTX-M-15+DHA-1+ NDM-1 (1), CTX-M-15+CTX-M-22+ OXA-48 (1)

Carbapenemases are indicated in bold letter

Table S3. Molecular characterization of extended-spectrum beta-lactamases and carbapenemases and distribution regarding ceftolozane-tazobactam MIC values in *P. aeruginosa*

Ceftolozane-tazobactam MIC (mg/L)	<i>P. aeruginosa</i> (n=267)	
	No.	Enzymes (no. of isolates)
0.25/4	3	None (3)
0.5/4	37	None (37)
1/4	62	None (62)
2/4	69	None (69)
4/4	23	None (21), FOX-14 (1), GES-5 (1)
8/4	24	None (22), CTX-M-2, GES-5 (1)
16/4	5	None (4), PER-1 (1)
32/4	6	None (4), PER-1 (1), VIM-20 (1)
>32/4	28	None (6), VIM-1 (9), VIM-2 (9), VIM-20 (2), IMP-13 (2)

Carbapenemases are indicated in bold letter

Figure S1. Percentage of *Escherichia coli*, *Klebsiella pneumoniae* and *Proteus mirabilis* isolates expressing ESBL phenotype in IAI, UTI and RTI in Spain in the SMART study (2016 and 2017)

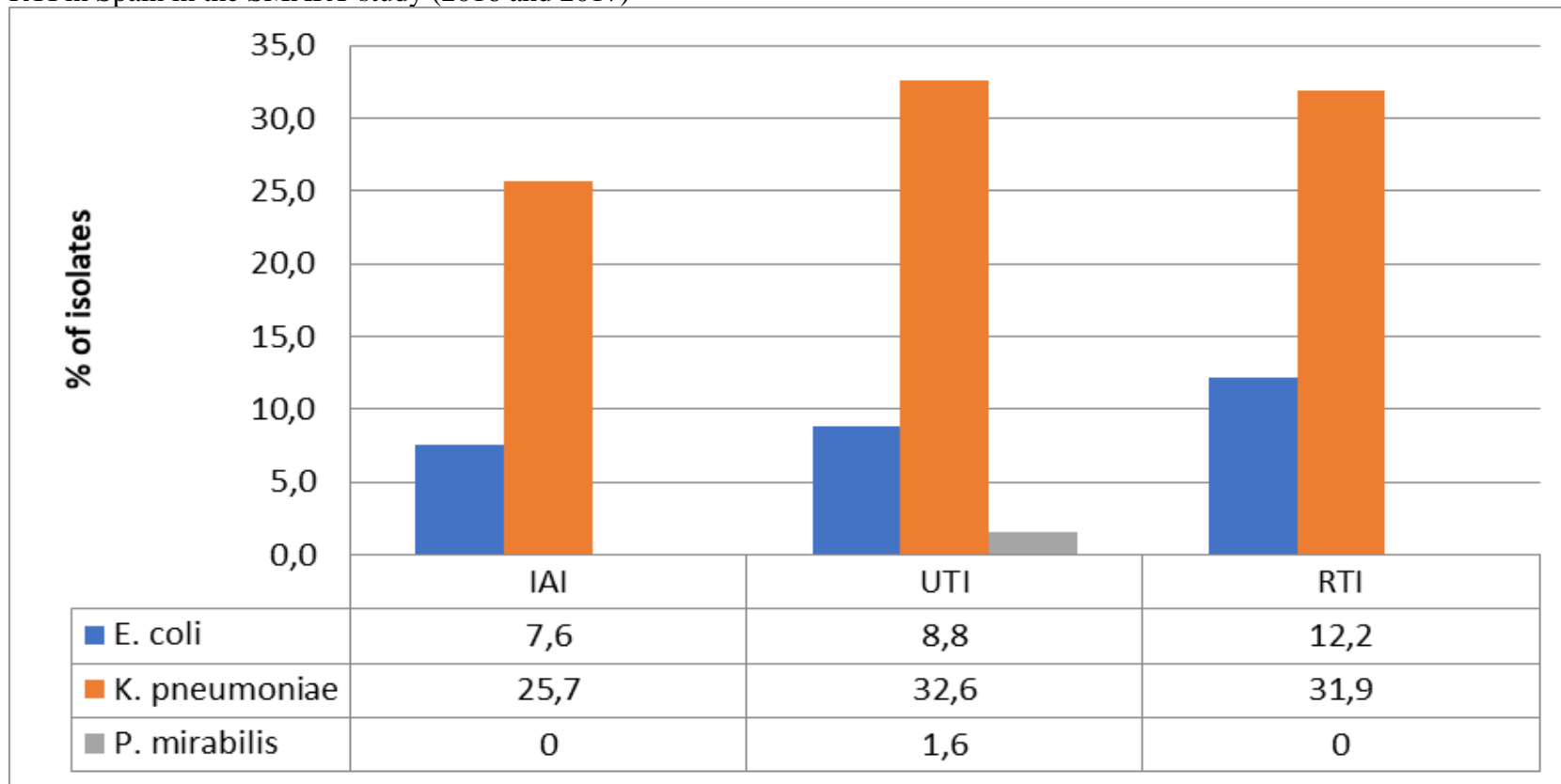


Figure S2. Comparative activity [% of susceptibility (S + I)] of different antimicrobials against no-ESBL and ESBL producing *Escherichia coli* and *Klebsiella pneumoniae* isolates recovered in Spain in the SMART study (2016 and 2017)

