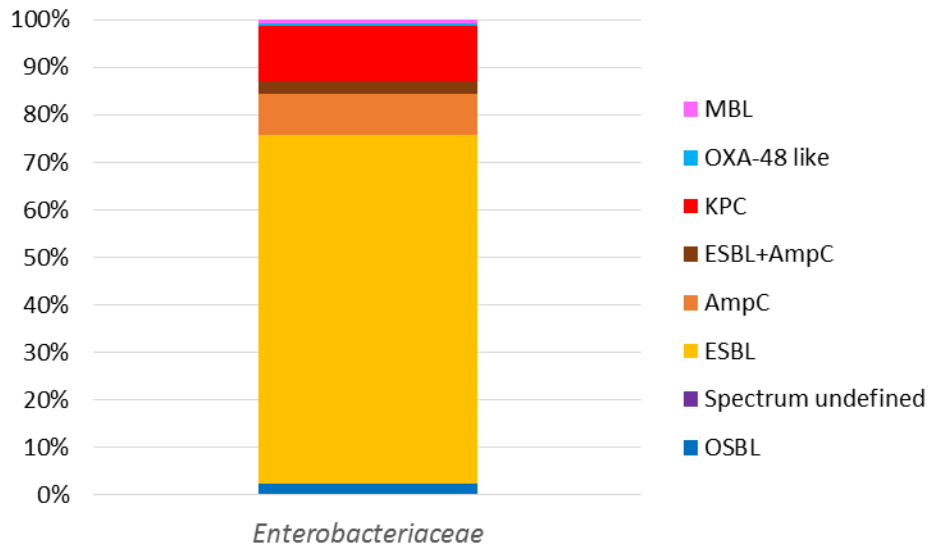
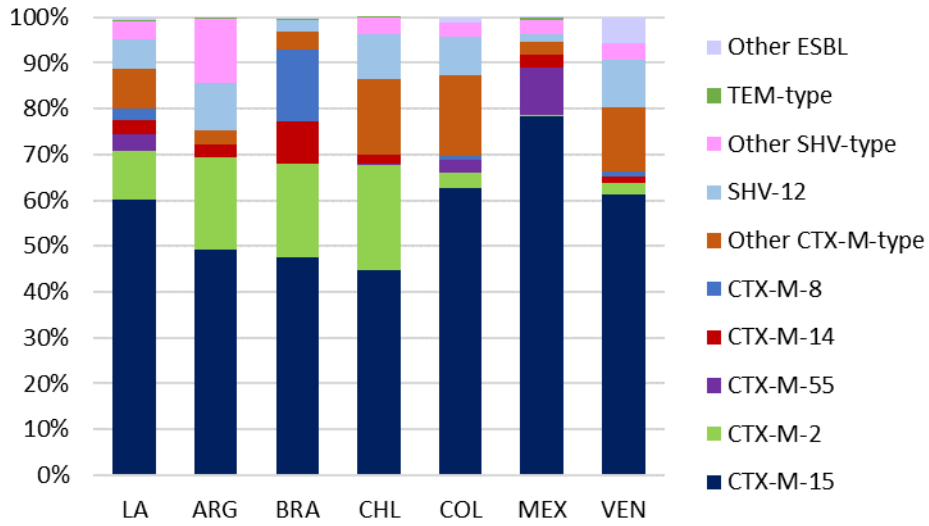
Supplementary Material – Karlowsky *et al*, "*In vitro* activity of ceftazidime-avibactam against clinical isolates of *Enterobacteriaceae* and *Pseudomonas aeruginosa* collected in Latin American countries: Results from the INFORM Global Surveillance Program, 2012–2015"

Figure S1A. Distribution of genes encoding β-lactamase enzyme types among 2,321 molecularly characterized *Enterobacteriaceae* isolates collected in Latin American countries from 2012–2015



The β-lactamase content of each subset is described in the footnote to Table 2; includes intrinsic and acquired β-lactamases. OSBL, original-spectrum β-lactamase (e.g. TEM-1, SHV-1, SHV-11); Spectrum undefined, SHV-type and/or TEM-type β-lactamases with undefined spectrum of activity; ESBL, extended-spectrum β-lactamase; MBL, metallo-β-lactamase.

Figure S1B. Distribution of genes encoding acquired extended-spectrum β-lactamases (ESBLs) in molecularly characterized isolates of *Enterobacteriaceae* collected in Latin American countries

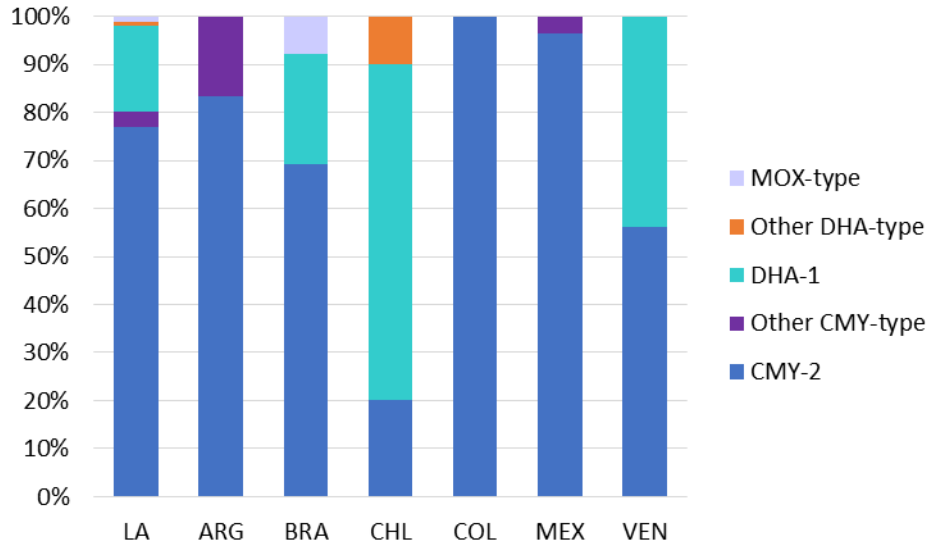


Region/Country (no. of ESBL genes detected | no. of ESBL-producing isolates): LA, Latin America (2,025 | 1,897); ARG, Argentina (231 | 212); BRA, Brazil (290 | 278); CHL, Chile (432 | 374); COL, Colombia (182 | 171); MEX, Mexico (630 | 618); VEN, Venezuela (268 | 244).

ESBL subtypes identified (total no. of genes): CTX-M-15 (1,217), CTX-M-2 (219), CTX-M-55 (72), CTX-M-14 (64), CTX-M-8 (50), CTX-M-3 (42), CTX-M-1 (30), CTX-M-12 (23), CTX-M-32 (13), CTX-M-27 (10), CTX-M-65 (10), CTX-M-30 (9), CTX-M-79 (8), CTX-M-136 (6), CTX-M-9 (5), CTX-M-124 (5), CTX-M-116 (4), CTX-M-13 (1), CTX-M-24 (1), CTX-M-28 (1), CTX-M-29 (1), CTX-M-59 (1), CTX-M-67 (1), CTX-M-75 (1), CTX-M-104 (1), CTX-M-165 (1), CTX-M-TYPE (1); SHV-12 (129), SHV-5 (44), SHV-2 (14), SHV-2A (8), SHV-7 (6), SHV-31 (3), SHV-28 (2), SHV-41 (2), SHV-55 (2), SHV-18 (1); TEM-4 (2), TEM-15 (1), TEM-28 (1), TEM-52 (1), TEM-93 (1); OXA-163* (11), PER-1 (3), and GES-7 (1).

*Also possesses weak carbapenemase activity that impacts the activity of carbapenems when combined with additional mechanisms of resistance such as porin deficiencies (Oueslati S, Nordmann P, Poirel L. 2015. J Antimicrob Chemother 70:1059-1063).

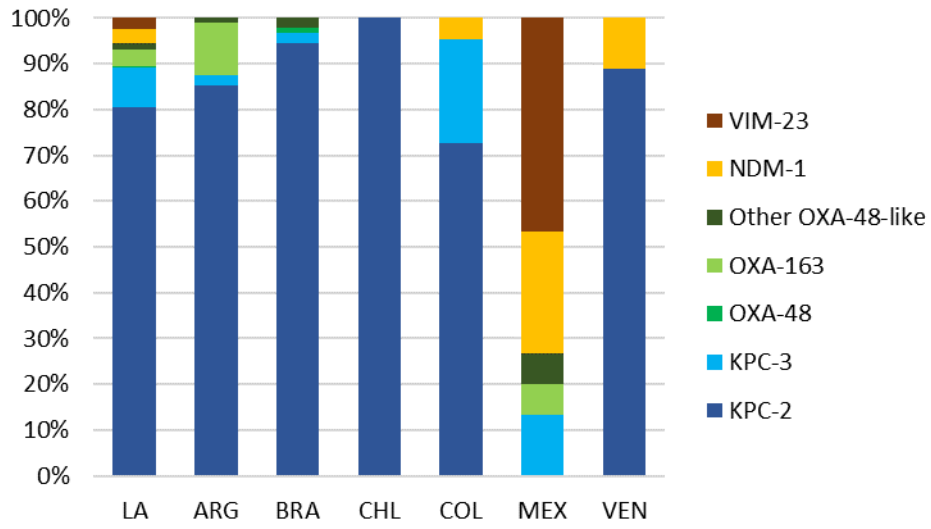
Figure S1C. Distribution of genes encoding acquired AmpC β-lactamases in molecularly characterized isolates of *Enterobacteriaceae* collected in Latin American countries



Region/Country (no. of AmpC genes detected | no. of AmpC-producing isolates): LA, Latin America (96 | 96); ARG, Argentina (12 | 12); BRA, Brazil (13 | 13); CHL, Chile (10 | 10); COL, Colombia (17 | 17); MEX, Mexico (28 | 28); VEN, Venezuela (16 | 16).

AmpC subtypes identified (total no. of genes): CMY-2 (74), CMY-TYPE (2), CMY-132 (1); DHA-1 (17), DHA-6 (1); and MOX-TYPE (1).

Figure S1D. Distribution of genes encoding acquired carbapenemases in molecularly characterized isolates of *Enterobacteriaceae* collected in Latin American countries



Region/Country (no. of carbapenemase genes detected | no. of carbapenemase-producing isolates): LA, Latin America (302 | 300); ARG, Argentina[a] (88 | 87); BRA, Brazil[a] (92 | 91); CHL, Chile (1 | 1); COL, Colombia (88 | 88); MEX, Mexico (15 | 15); VEN, Venezuela (18 | 18).

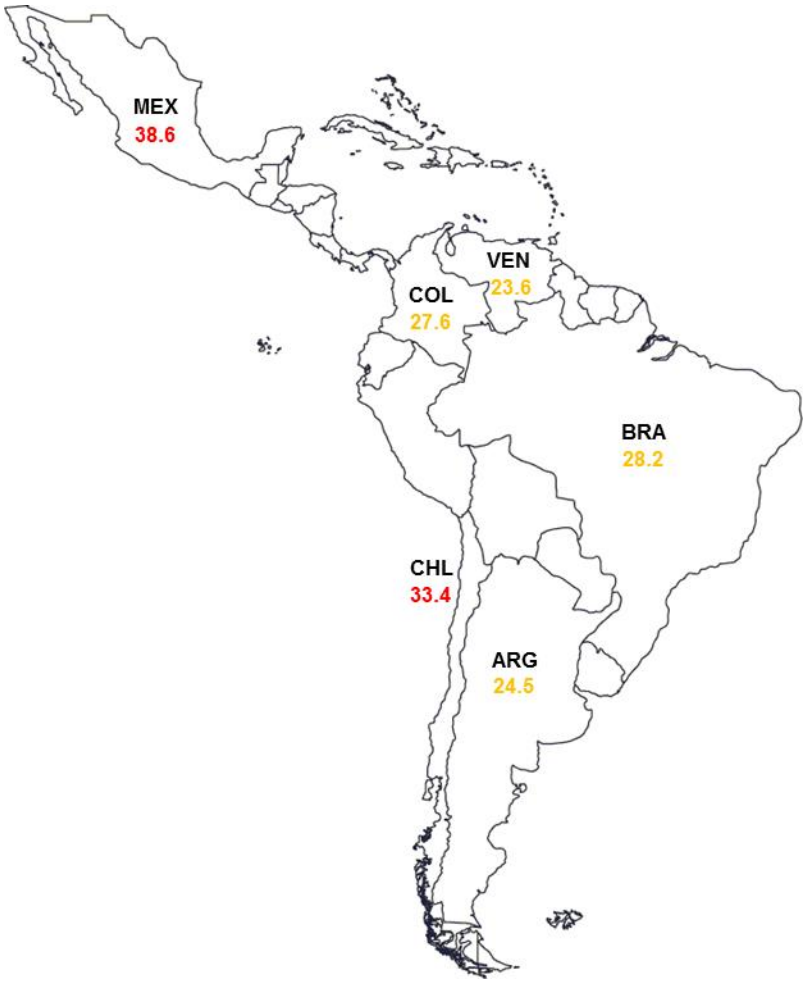
Carbapenemase subtypes identified (total no. of genes): KPC-2 (243), KPC-3 (26); OXA-48 (1), OXA-163[b] (11), OXA-232 (1), OXA-370 (2), OXA-439[c] (1); NDM-1 (10), and VIM-23 (7).

[a] Includes one isolate carrying KPC-2 and OXA-163 (Argentina) and one isolate carrying KPC-2 and OXA-370 (Brazil).

[b] Possesses weak carbapenemase activity that impacts the activity of carbapenems when combined with additional mechanisms of resistance such as porin deficiencies (Oueslati S, Nordmann P, Poirel L. 2015. J Antimicrob Chemother 70:1059-1063).

[c] Has not been confirmed to possess carbapenemase activity.

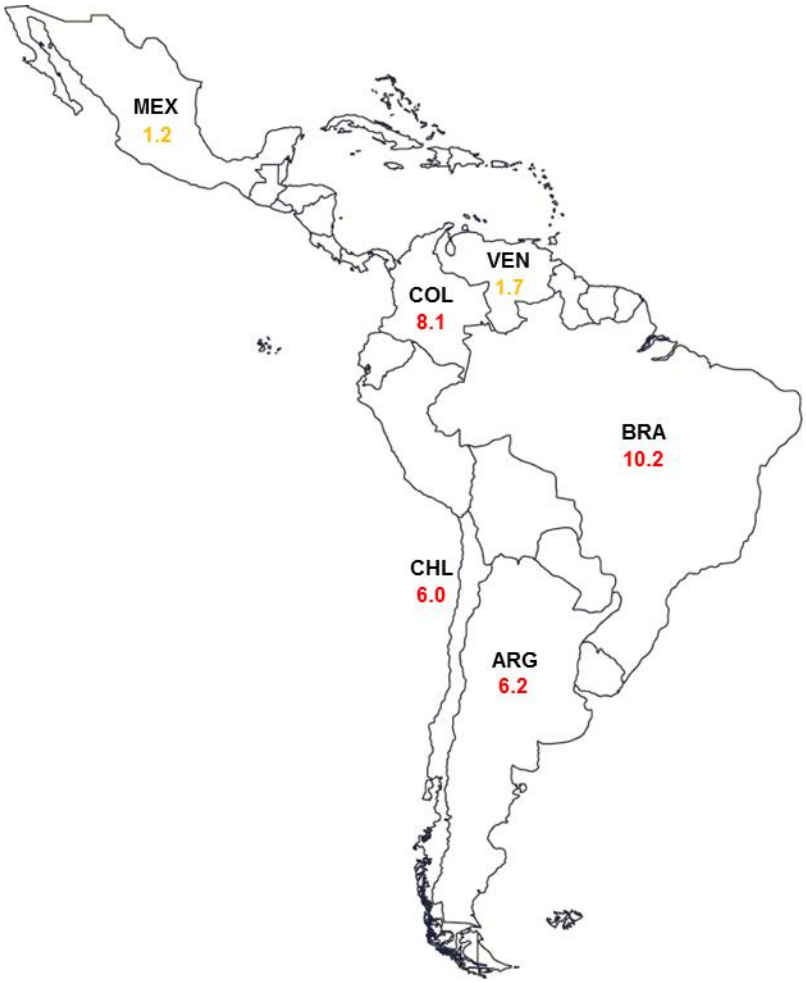
Figure S2. Percentages of *Enterobacteriaceae* isolates collected in 2012–2015 that were ceftazidime non-susceptible, by Latin American country.[a]



[a]Ceftazidime non-susceptible (CAZ-NS), ≥8 mg/L by CLSI 2016 criteria. Green font, <20% of tested isolates were CAZ-NS; orange font, 20–29.9% of isolates were CAZ-NS; red font, >30% of isolates were CAZ-NS.

ARG, Argentina; BRA, Brazil; CHL, Chile; COL, Colombia; MEX, Mexico; VEN, Venezuela.

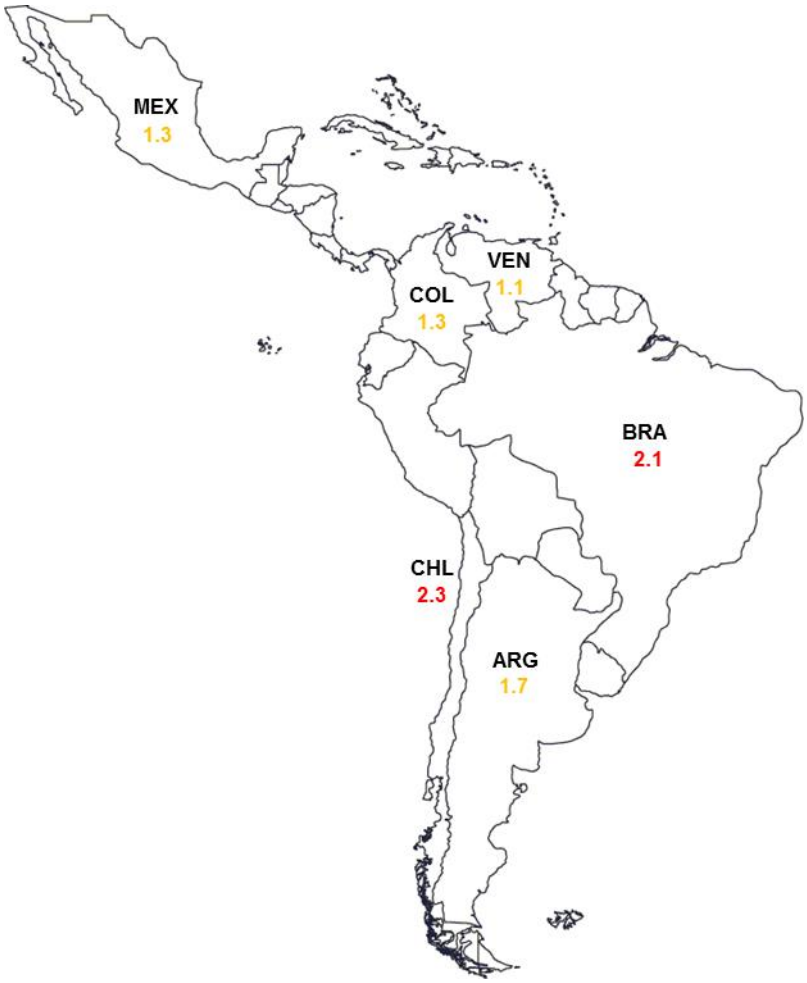
Figure S3. Percentages of *Enterobacteriaceae* isolates collected in 2012–2015 that were meropenem non-susceptible, by Latin American country.[a]



[a]Meropenem non-susceptible (MEM-NS), ≥2 mg/L byCLSI 2016 criteria. Green font, <1% of tested isolates were MEM-NS; orange font, 1–1.9% of isolates were MEM-NS; red font, ≥2% of isolates were MEM-NS.

ARG, Argentina; BRA, Brazil; CHL, Chile; COL, Colombia; MEX, Mexico; VEN, Venezuela.

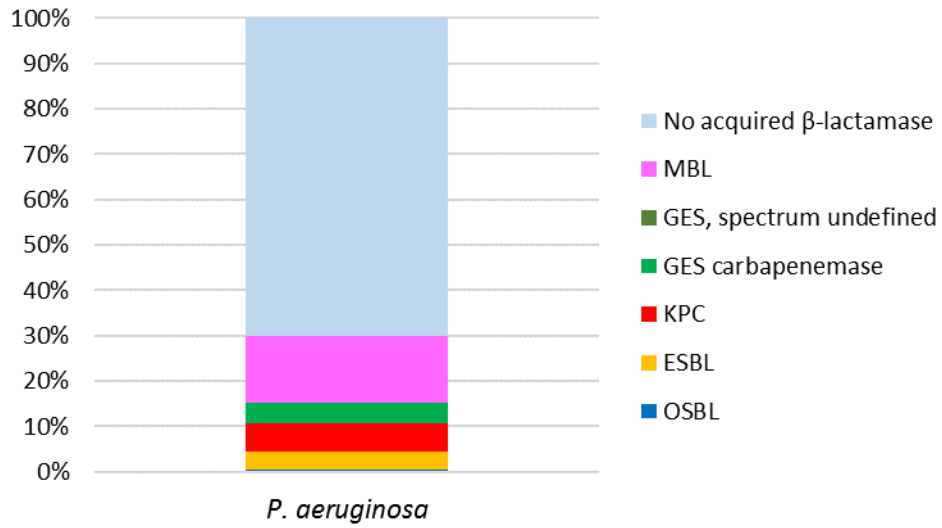
Figure S4. Percentages of *Enterobacteriaceae* isolates collected in 2014–2015 that were colistin-resistant, by Latin American country.[a]



[a]Colistin-resistant (CST-R), ≥4 mg/L by EUCAST 2016 criteria. Green font, <1% of tested isolates were CST-R; orange font, 1–1.9% of isolates were CST-R; red font, ≥2% of isolates were CST-R. Excludes isolates of Proteeae and *Serratia* spp., which are intrinsically resistant to colistin.

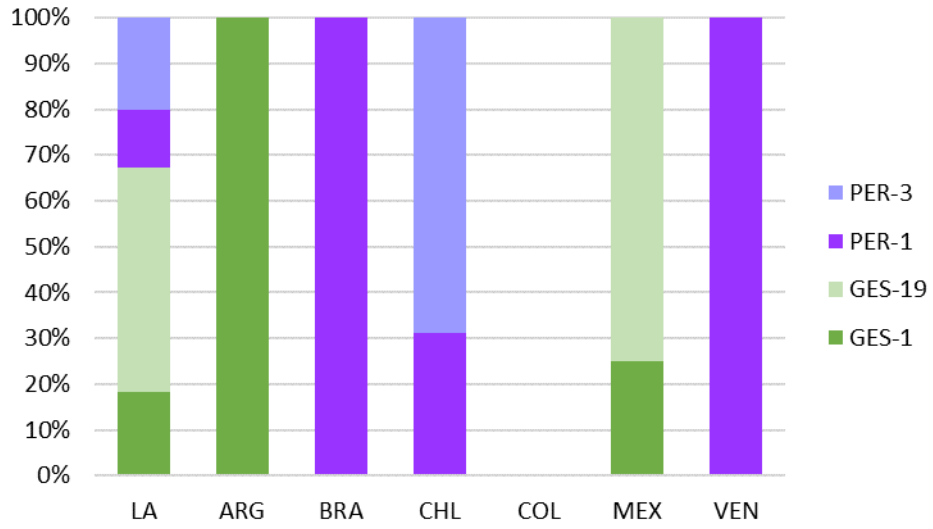
ARG, Argentina; BRA, Brazil; CHL, Chile; COL, Colombia; MEX, Mexico; VEN, Venezuela.

Figure S5A. Distribution of genes encoding β-lactamase enzyme types among 750 molecularly characterized carbapenem non-susceptible *P. aeruginosa* isolates collected in Latin American countries from 2012–2015



β-lactamase content of each subset is described in the footnote to Table 2; includes intrinsic and acquired β-lactamases. OSBL, original-spectrum β-lactamase (e.g. TEM-1, SHV-1, SHV-11); ESBL, extended-spectrum β-lactamase; GES, spectrum undefined, β-lactamase with undefined spectrum of activity (ESBL or carbapenemase); MBL, metallo-β-lactamase.

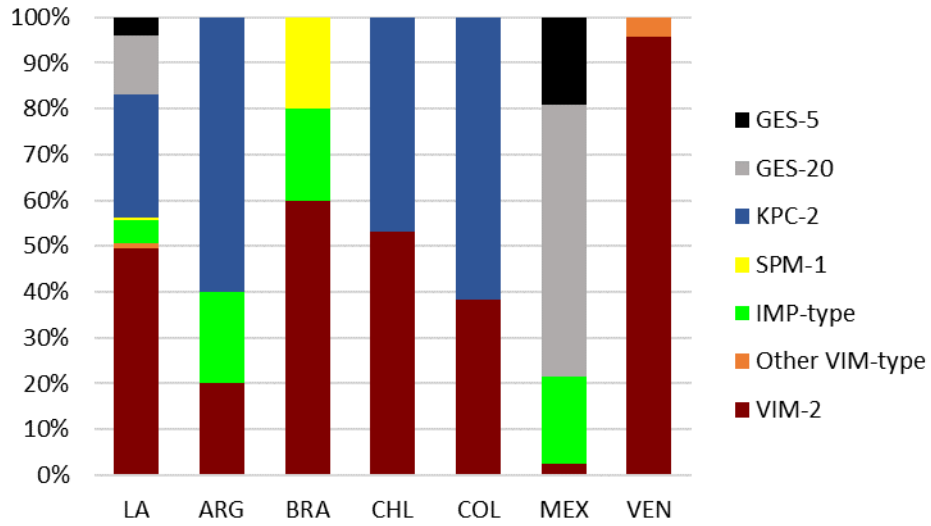
Figure S5B. Distribution of genes encoding acquired extended-spectrum β-lactamases (ESBLs) in molecularly characterized carbapenem non-susceptible isolates of *P. aeruginosa* collected in Latin American countries



Region/Country (no. of ESBL genes detected | no. of ESBL-producing isolates): LA, Latin America (55 | 55); ARG, Argentina (1 | 1); BRA, Brazil (1 | 1); CHL, Chile (16 | 16); COL, Colombia (0 | 0); MEX, Mexico (36 | 36); VEN, Venezuela (1 | 1).

ESBL subtypes identified (total no. of genes): GES-1 (10), GES-19 (27), PER-1 (7), and PER-3 (11).

Figure S5C. Distribution of genes encoding acquired carbapenemases in molecularly characterized carbapenem non-susceptible isolates of *P. aeruginosa* collected in Latin American countries



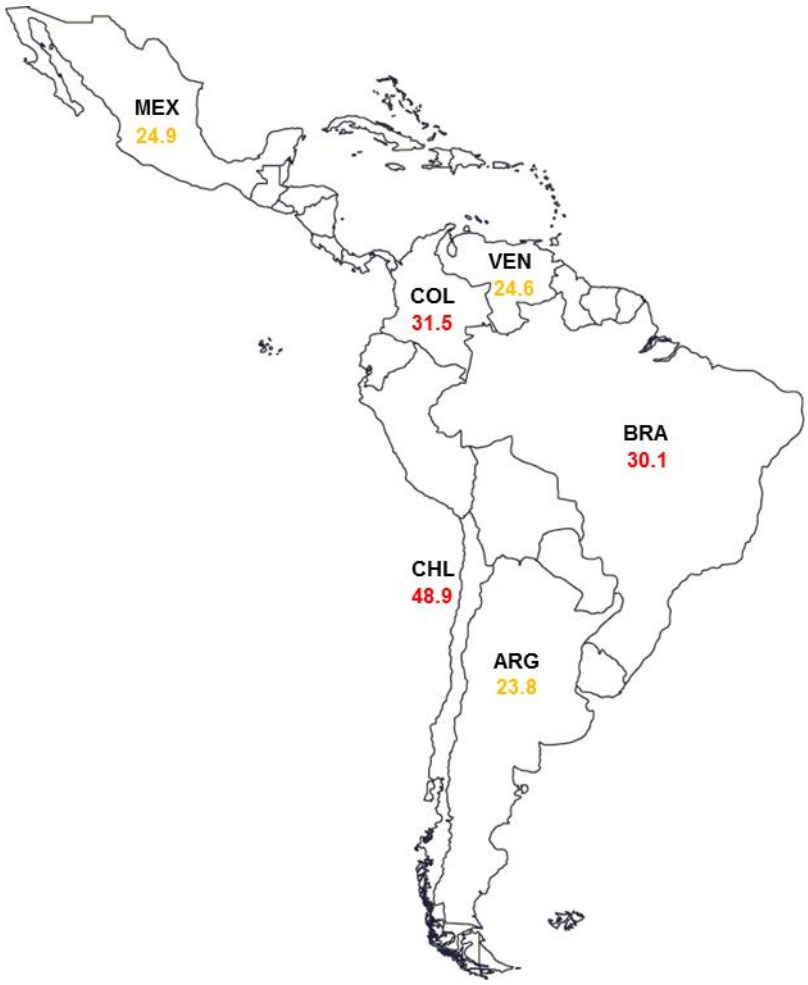
Region/Country (no. of carbapenemase genes detected | no. of carbapenemase-producing isolates): LA, Latin America (196 | 191); ARG, Argentina (5 | 5); BRA, Brazil (5 | 5); CHL, Chile[a] (62 | 57); COL, Colombia (34 | 34); MEX, Mexico (42 | 42); VEN, Venezuela (48 | 48).

Carbapenemase subtypes identified (total no. of genes): VIM-2 (97), VIM-50 (2); IMP-15 (4), IMP-1 (2), IMP-18 (2), IMP-16 (1), IMP-49 (1); SPM-1 (1); KPC-2 (53); GES-20[b] (25), and GES-5[b] (8).

[a] Five isolates collected in Chile co-carried VIM-2 and KPC-2.

[b] Twenty-four isolates co-carried GES-20 and GES-19, and two isolates co-carried GES-5 and GES-1.

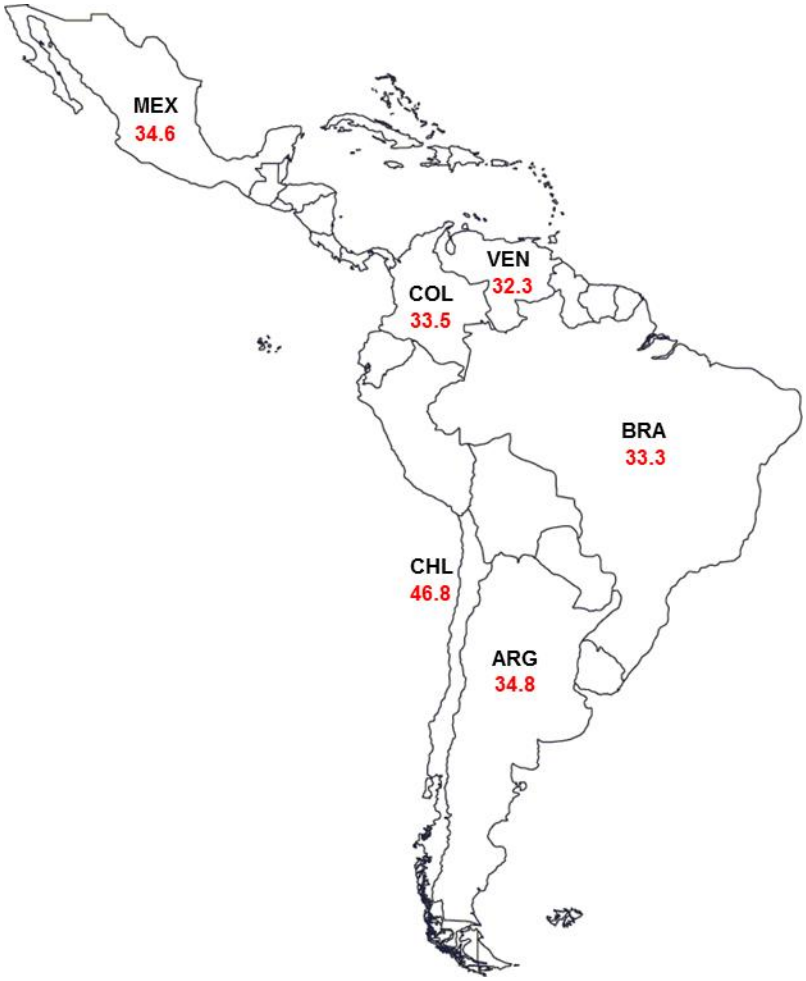
Figure S6. Percentages of *P. aeruginosa* isolates collected in 2012–2015 that were ceftazidime non-susceptible, by Latin American country.[a]



[a]Ceftazidime non-susceptible (CAZ-NS), ≥16 mg/L by CLSI 2016 criteria. Green font, <20% of tested isolates were CAZ-NS; orange font, 20-29.9% of isolates were CAZ-NS; red font, >30% of isolates were CAZ-NS.

ARG, Argentina; BRA, Brazil; CHL, Chile; COL, Colombia; MEX, Mexico; VEN, Venezuela.

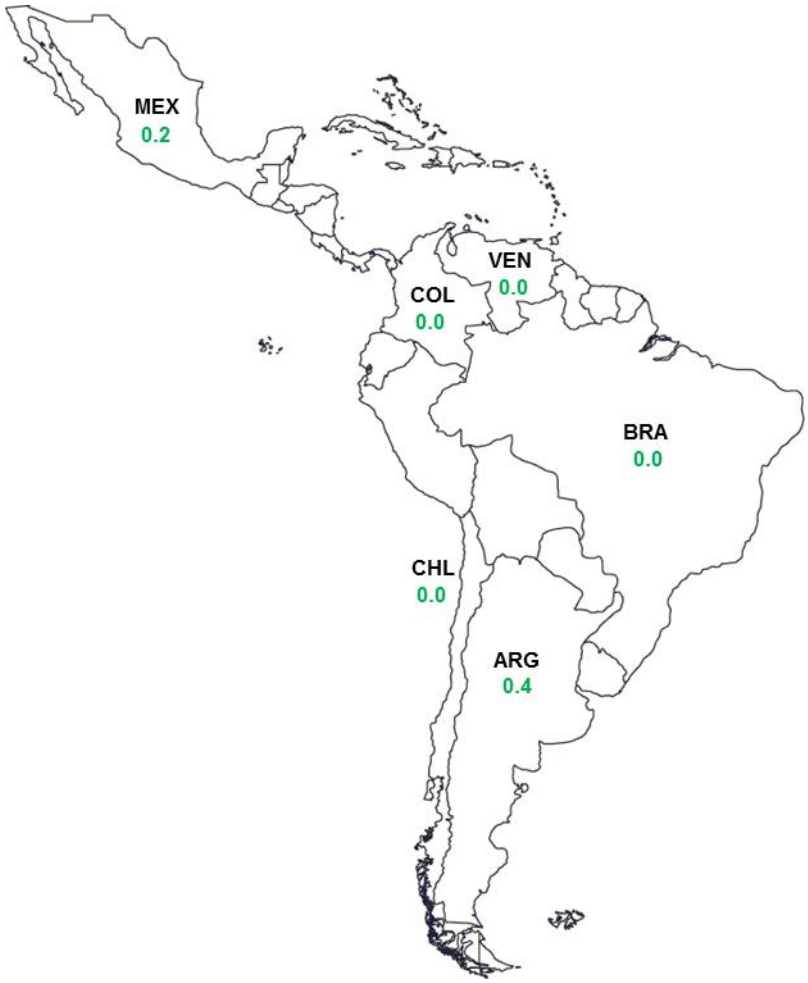
Figure S7. Percentages of *P. aeruginosa* isolates collected in 2012–2015 that were meropenem non-susceptible, by Latin American country.[a]



[a]Meropenem non-susceptible (MEM-NS), ≥4 mg/L by CLSI 2016 criteria. Green font, <20% of tested isolates were MEM-NS; orange font, 20-29.9% of isolates were MEM-NS; red font, ≥30% of isolates were MEM-NS.

ARG, Argentina; BRA, Brazil; CHL, Chile; COL, Colombia; MEX, Mexico; VEN, Venezuela.

Figure S8. Percentages of *P. aeruginosa* isolates collected in 2014–2015 that were colistin-resistant, by Latin American country.[a]



[a]Colistin-resistant (CST-R), ≥8 mg/L by CLSI 2016 criteria. Green font, <1% of tested isolates were CST-R; orange font, 1-1.9% of isolates were CST-R.

ARG, Argentina; BRA, Brazil; CHL, Chile; COL, Colombia; MEX, Mexico; VEN, Venezuela.

Table S1. Demographic information associated with the 9,459 Gram-negative bacilli tested by the INFORM global surveillance program from 2012 to 2015

		Enterobacteriaceae (no. of isolates)	*P. aeruginosa* (no. of isolates)
Total no. of isolates		7,665	1,794
Specimen source			
	Intra-abdominal	1,835	231
	Urinary tract	2,175	261
	Skin and soft tissue	1,795	507
	Lower respiratory tract	1,268	686
	Bloodstream	573	106
	Other	19	3
Country (number of participating medical centers)			
	Argentina (3)	1,279	282
	Brazil (6)	1,115	276
	Chile (3)	1,236	282
	Colombia (4)	972	200
	Mexico (7)	1,862	457
	Venezuela (3)	1,201	297
Year of isolation			
	2012	1,272	204
	2013	1,877	289
	2014	2,168	595
	2015	2,348	706

Table S2A. Argentina - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 1,561 isolates of *Enterobacteriaceae* and *P. aeruginosa* collected as part of the INFORM global surveillance program in 2012-2015.

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae					
All (1,279)[d]	Ceftazidime-avibactam	0.12	0.5	≤0.015–>128	99.5
	Ceftazidime	0.25	64	0.03–>128	75.5
	Cefepime	≤0.12	>16	≤0.12–>16	76.2
	Aztreonam	0.12	128	≤0.015–>128	74.3
	Piperacillin-tazobactam	4	>128	≤0.25–>128	77.3
	Doripenem	0.06	0.25	≤0.008–>4	94.1
	Imipenem	0.25	4	≤0.03–>8	81.6
	Meropenem	0.03	0.12	≤0.004–>8	93.8
	Amikacin	2	16	≤0.25–>32	93.6
	Colistin (n=698)[e]	0.5	>4	≤0.12–>4	80.8
	Tigecycline	0.5	2	0.06–8	93.4
	Levofloxacin	0.12	>4	≤0.03–>4	70.8
Ceftazidime non-susceptible (313)[d]	Ceftazidime-avibactam	0.5	2	0.03–>128	98.1
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	18.9
	Aztreonam	64	>128	0.25–>128	5.4
	Piperacillin-tazobactam	128	>128	0.5–>128	28.8
	Doripenem	0.12	>4	0.015–>4	76.4
	Imipenem	0.5	>8	0.06–>8	70.9
	Meropenem	0.06	>8	≤0.004–>8	75.1
	Amikacin	4	32	0.5–>32	77.3
	Colistin (n=167)[e]	0.5	>4	0.25–>4	86.2
	Tigecycline	1	2	0.06–8	92.3
	Levofloxacin	>4	>4	≤0.03–>4	32.9
Meropenem non-susceptible (79)[d]	Ceftazidime-avibactam	0.5	2	0.03–16	98.7
	Ceftazidime	64	>128	2–>128	1.3
	Cefepime	>16	>16	≤0.12–>16	5.1
	Aztreonam	>128	>128	0.25–>128	2.5
	Piperacillin-tazobactam	>128	>128	64–>128	0
	Doripenem	>4	>4	1–>4	5.1
	Imipenem	>8	>8	0.06–>8	5.1
	Meropenem	>8	>8	2–>8	0
	Amikacin	16	>32	1–>32	50.6
	Colistin (n=50)[e]	1	>4	0.25–>4	70.0
	Tigecycline	1	2	0.12–4	97.5
	Levofloxacin	>4	>4	0.12–>4	7.6
Colistin-resistant (22)[d,f]	Ceftazidime-avibactam	0.5	1	0.03–2	100
	Ceftazidime	32	>128	0.5–>128	22.7
	Cefepime	16	>16	≤0.12–>16	18.2
	Aztreonam	128	>128	0.12–>128	18.2
	Piperacillin-tazobactam	>128	>128	2–>128	18.2
	Doripenem	4	>4	0.03–>4	40.9
	Imipenem	8	>8	0.12–>8	36.4
	Meropenem	8	>8	0.03–>8	40.9
	Amikacin	16	>32	1–>32	68.2
	Colistin (n=22)[e]	>4	>4	4–>4	0
	Tigecycline	0.5	1	0.25–4	95.5
	Levofloxacin	>4	>4	≤0.03–>4	9.1
Multidrug-resistant (221)[d]	Ceftazidime-avibactam	0.5	2	0.03–32	97.7
	Ceftazidime	64	>128	0.12–>128	9.5
	Cefepime	>16	>16	≤0.12–>16	4.5

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Aztreonam	128	>128	≤0.015–>128	3.6
	Piperacillin-tazobactam	>128	>128	≤0.25–>128	19.5
	Doripenem	0.12	>4	0.015–>4	66.1
	Imipenem	0.5	>8	0.06–>8	62.0
	Meropenem	0.12	>8	0.03–>8	65.2
	Amikacin	8	32	1–>32	67.9
	Colistin (n=126)[e]	1	>4	0.25–>4	76.2
	Tigecycline	1	2	0.12–8	90.5
	Levofloxacin	>4	>4	≤0.03–>4	12.2
Escherichia coli					
All (425)[d]	Ceftazidime-avibactam	0.06	0.25	≤0.015–1	100
	Ceftazidime	0.25	16	0.03–>128	87.5
	Cefepime	≤0.12	8	≤0.12–>16	88.2
	Aztreonam	0.12	16	≤0.015–>128	86.1
	Piperacillin-tazobactam	2	16	≤0.25–>128	90.1
	Doripenem	0.03	0.06	≤0.008–>4	99.1
	Imipenem	0.12	0.25	0.06–>8	99.1
	Meropenem	0.03	0.06	≤0.004–>8	99.1
	Amikacin	2	8	1–>32	98.4
	Colistin (n=212)[e]	0.5	1	≤0.12–>4	98.6
	Tigecycline	0.25	0.5	0.06–4	99.8
	Levofloxacin	0.25	>4	≤0.03–>4	67.5
Ceftazidime non-susceptible (53)[d]	Ceftazidime-avibactam	0.25	0.5	0.03–1	100
	Ceftazidime	32	128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	34.0
	Aztreonam	32	>128	1–>128	7.6
	Piperacillin-tazobactam	8	>128	2–>128	60.4
	Doripenem	0.06	0.12	0.015–>4	92.5
	Imipenem	0.25	0.5	0.06–>8	92.5
	Meropenem	0.03	0.06	≤0.004–>8	92.5
	Amikacin	4	16	2–>32	90.6
	Colistin (n=23)[e]	0.5	1	0.25–>4	95.7
	Tigecycline	0.25	0.5	0.06–4	98.1
	Levofloxacin	>4	>4	≤0.03–>4	17.0
Meropenem non-susceptible (4)[d]	Ceftazidime-avibactam	—[b]	—	0.03–0.25	100
	Ceftazidime	—	—	16–64	0
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	128–>128	0
	Piperacillin-tazobactam	—	—	>128–>128	0
	Doripenem	—	—	2–>4	0
	Imipenem	—	—	4–>8	0
	Meropenem	—	—	8–>8	0
	Amikacin	—	—	4–>32	50.0
	Colistin (n=4)[e]	—	—	0.5–1	100
	Tigecycline	—	—	0.12–0.25	100
	Levofloxacin	—	—	4–>4	0
Colistin-resistant (3)[d]	Ceftazidime-avibactam	—[b]	—	0.12–0.25	100
	Ceftazidime	—	—	0.5–8	66.7
	Cefepime	—	—	0.25–>16	33.3
	Aztreonam	—	—	0.25–32	33.3
	Piperacillin-tazobactam	—	—	2–32	66.7
	Doripenem	—	—	0.03–0.06	100
	Imipenem	—	—	0.25–0.25	100
	Meropenem	—	—	0.03–0.06	100
	Amikacin	—	—	2–4	100
	Colistin (n=3)[e]	—	—	4–>4	0
	Tigecycline	—	—	0.25–0.5	100
	Levofloxacin	—	—	≤0.03–>4	33.3
Multidrug-resistant (36)[d]	Ceftazidime-avibactam	0.25	0.5	0.03–1	100

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Ceftazidime	32	128	0.5–>128	13.9
	Cefepime	>16	>16	16–>16	0
	Aztreonam	64	>128	0.25–>128	2.8
	Piperacillin-tazobactam	8	>128	2–>128	61.1
	Doripenem	0.06	2	0.015–>4	88.9
	Imipenem	0.25	4	0.12–>8	88.9
	Meropenem	0.03	8	0.03–>8	88.9
	Amikacin	8	32	2–>32	83.3
	Colistin (n=18)[e]	0.5	4	0.25–>4	88.9
	Tigecycline	0.25	0.5	0.12–4	97.2
	Levofloxacin	>4	>4	≤0.03–>4	5.6
Klebsiella pneumoniae					
All (357)[d]	Ceftazidime-avibactam	0.12	1	≤0.015–4	100
	Ceftazidime	4	>128	0.06–>128	50.1
	Cefepime	1	>16	≤0.12–>16	51.8
	Aztreonam	2	>128	≤0.015–>128	50.1
	Piperacillin-tazobactam	16	>128	0.5–>128	53.8
	Doripenem	0.06	>4	0.03–>4	81.8
	Imipenem	0.25	>8	0.06–>8	81.0
	Meropenem	0.06	>8	0.015–>8	80.7
	Amikacin	2	32	≤0.25–>32	84.6
	Colistin (n=213)[e]	0.5	2	0.25–>4	91.6
	Tigecycline	1	2	0.12–8	96.6
	Levofloxacin	1	>4	≤0.03–>4	60.5
Ceftazidime non-susceptible (178)[d]	Ceftazidime-avibactam	0.5	1	0.03–4	100
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	4.5
	Aztreonam	128	>128	0.25–>128	1.1
	Piperacillin-tazobactam	>128	>128	4–>128	18.5
	Doripenem	0.12	>4	0.03–>4	63.5
	Imipenem	0.5	>8	0.06–>8	61.8
	Meropenem	0.12	>8	0.03–>8	61.2
	Amikacin	8	32	1–>32	70.2
	Colistin (n=103)[e]	1	>4	0.25–>4	84.5
	Tigecycline	1	2	0.12–8	94.9
	Levofloxacin	>4	>4	0.06–>4	28.7
Meropenem non-susceptible (69)[d]	Ceftazidime-avibactam	1	2	0.03–2	100
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	2.9
	Aztreonam	>128	>128	0.25–>128	1.5
	Piperacillin-tazobactam	>128	>128	128–>128	0
	Doripenem	>4	>4	1–>4	5.8
	Imipenem	>8	>8	0.06–>8	5.8
	Meropenem	>8	>8	2–>8	0
	Amikacin	32	>32	1–>32	46.4
	Colistin (n=42)[e]	1	>4	0.25–>4	69.1
	Tigecycline	1	2	0.25–4	97.1
	Levofloxacin	>4	>4	2–>4	1.5
Colistin-resistant (18)[d]	Ceftazidime-avibactam	0.5	2	0.03–2	100
	Ceftazidime	32	>128	0.5–>128	11.1
	Cefepime	>16	>16	≤0.12–>16	11.1
	Aztreonam	>128	>128	0.12–>128	11.1
	Piperacillin-tazobactam	>128	>128	4–>128	5.6
	Doripenem	4	>4	0.03–>4	27.8
	Imipenem	>8	>8	0.12–>8	22.2
	Meropenem	>8	>8	0.03–>8	27.8
	Amikacin	16	>32	1–>32	61.1
	Colistin (n=18)[e]	>4	>4	4–>4	0
	Tigecycline	0.5	2	0.25–4	94.4
	Levofloxacin	>4	>4	4–>4	0

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Multidrug-resistant (134)[d]	Ceftazidime-avibactam	0.5	1	0.03–2	100
	Ceftazidime	64	>128	0.5–>128	0.8
	Cefepime	>16	>16	≤0.12–>16	2.2
	Aztreonam	>128	>128	0.12–>128	0.8
	Piperacillin-tazobactam	>128	>128	4–>128	6.0
	Doripenem	1	>4	0.03–>4	51.5
	Imipenem	2	>8	0.06–>8	50.0
	Meropenem	2	>8	0.03–>8	49.3
	Amikacin	16	32	1–>32	61.2
	Colistin (n=79)[e]	1	>4	0.25–>4	78.5
	Tigecycline	1	2	0.12–8	93.3
	Levofloxacin	>4	>4	0.12–>4	7.5
Klebsiella oxytoca[g]					
All (71)[d]	Ceftazidime-avibactam	0.12	0.5	0.03–16	98.6
	Ceftazidime	0.12	2	0.06–>128	93.0
	Cefepime	≤0.12	2	≤0.12–16	90.1
	Aztreonam	0.25	128	0.03–>128	81.7
	Piperacillin-tazobactam	2	>128	0.5–>128	80.3
	Doripenem	0.06	0.12	0.03–>4	98.6
	Imipenem	0.25	0.5	0.06–8	97.2
	Meropenem	0.03	0.06	0.015–>8	98.6
	Amikacin	2	4	0.5–32	98.6
	Colistin (n=38)[e]	0.5	1	0.25–1	100
	Tigecycline	0.5	1	0.12–2	100
	Levofloxacin	0.06	2	≤0.03–>4	91.6
Ceftazidime non-susceptible (5)[d]	Ceftazidime-avibactam	—[b]	—	0.5–16	80.0
	Ceftazidime	—	—	8–>128	0
	Cefepime	—	—	1–16	20.0
	Aztreonam	—	—	32–>128	0
	Piperacillin-tazobactam	—	—	2–>128	20.0
	Doripenem	—	—	0.03–>4	80.0
	Imipenem	—	—	0.25–8	60.0
	Meropenem	—	—	0.03–>8	80.0
	Amikacin	—	—	0.5–32	80.0
	Colistin (n=2)[e]	—	—	0.5–1	100
	Tigecycline	—	—	0.25–1	100
	Levofloxacin	—	—	0.06–>4	80.0
Meropenem non-susceptible (1)[d]	Ceftazidime-avibactam	—[b]	—	16	0
	Ceftazidime	—	—	>128	0
	Cefepime	—	—	8	0
	Aztreonam	—	—	>128	0
	Piperacillin-tazobactam	—	—	128	0
	Doripenem	—	—	>4	0
	Imipenem	—	—	8	0
	Meropenem	—	—	>8	0
	Amikacin	—	—	8	100
	Colistin (n=0)[e]	—	—	ND[e]	ND
	Tigecycline	—	—	1	100
	Levofloxacin	—	—	2	100
Multidrug-resistant (5)[d]	Ceftazidime-avibactam	—[b]	—	0.25–16	80.0
	Ceftazidime	—	—	1–>128	60.0
	Cefepime	—	—	2–16	40.0
	Aztreonam	—	—	128–>128	0
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	0.06–>4	80.0
	Imipenem	—	—	0.12–8	80.0
	Meropenem	—	—	0.06–>8	80.0
	Amikacin	—	—	1–32	80.0
	Colistin (n=3)[e]	—	—	0.5–1	100

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Tigecycline	—	—	0.5–2	100
	Levofloxacin	—	—	2–>4	20.0
Enterobacter spp.					
All (136)[d,h]	Ceftazidime-avibactam	0.25	2	0.03–32	97.1
	Ceftazidime	0.5	>128	0.03–>128	64.7
	Cefepime	≤0.12	>16	≤0.12–>16	71.3
	Aztreonam	0.25	>128	≤0.015–>128	62.5
	Piperacillin-tazobactam	4	>128	1–>128	69.1
	Doripenem	0.06	0.25	0.015–>4	97.8
	Imipenem	0.5	2	≤0.03–>8	86.8
	Meropenem	0.06	0.25	0.008–>8	97.8
	Amikacin	2	8	0.5–32	97.8
	Colistin (n=77)[e]	0.5	1	0.25–>4	98.7
	Tigecycline	0.5	2	0.25–4	93.4
	Levofloxacin	0.12	>4	≤0.03–>4	77.9
Ceftazidime non-susceptible (48)[d]	Ceftazidime-avibactam	1	8	0.03–32	91.7
	Ceftazidime	128	>128	8–>128	0
	Cefepime	16	>16	≤0.12–>16	27.1
	Aztreonam	64	>128	2–>128	2.1
	Piperacillin-tazobactam	64	>128	2–>128	22.9
	Doripenem	0.12	0.5	0.03–>4	93.8
	Imipenem	0.5	2	0.06–>8	89.6
	Meropenem	0.12	1	0.03–>8	93.8
	Amikacin	4	16	0.5–32	93.8
	Colistin (n=29)[e]	0.5	1	0.25–1	100
	Tigecycline	1	4	0.25–4	85.4
	Levofloxacin	2	>4	≤0.03–>4	50.0
Meropenem non-susceptible (3)[d]	Ceftazidime-avibactam	—[b]	—	0.5–4	100
	Ceftazidime	—	—	128–>128	0
	Cefepime	—	—	≤0.12–>16	33.3
	Aztreonam	—	—	>128–>128	0
	Piperacillin-tazobactam	—	—	>128–>128	0
	Doripenem	—	—	2–>4	0
	Imipenem	—	—	4–>8	0
	Meropenem	—	—	2–>8	0
	Amikacin	—	—	4–16	100
	Colistin (n=2)[e]	—	—	0.5–1	100
	Tigecycline	—	—	0.25–0.5	100
	Levofloxacin	—	—	0.12–>4	66.7
Colistin-resistant (1)[d]	Ceftazidime-avibactam	—[b]	—	0.5	100
	Ceftazidime	—	—	2	100
	Cefepime	—	—	≤0.12	100
	Aztreonam	—	—	0.5	100
	Piperacillin-tazobactam	—	—	4	100
	Doripenem	—	—	0.12	100
	Imipenem	—	—	0.5	100
	Meropenem	—	—	0.12	100
	Amikacin	—	—	2	100
	Colistin (n=1)[e]	—	—	>4	0
	Tigecycline	—	—	0.5	100
	Levofloxacin	—	—	0.06	100
Multidrug-resistant (26)[d]	Ceftazidime-avibactam	2	32	0.25–32	84.6
	Ceftazidime	128	>128	16–>128	0
	Cefepime	>16	>16	≤0.12–>16	7.7
	Aztreonam	128	>128	32–>128	0
	Piperacillin-tazobactam	>128	>128	8–>128	11.5
	Doripenem	0.25	2	0.06–>4	88.5
	Imipenem	0.5	4	0.06–>8	88.5
	Meropenem	0.12	2	0.06–>8	88.5

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Amikacin	4	32	1–32	88.5
	Colistin (n=15)[e]	0.5	1	0.25–1	100
	Tigecycline	1	4	0.25–4	80.8
	Levofloxacin	>4	>4	0.12–>4	19.2
Citrobacter spp.[g,j]					
All (71)[d,i]	Ceftazidime-avibactam	0.12	0.5	≤0.015–1	100
	Ceftazidime	0.5	128	0.06–>128	81.7
	Cefepime	≤0.12	1	≤0.12–16	93.0
	Aztreonam	0.12	32	0.03–>128	81.7
	Piperacillin-tazobactam	4	128	1–>128	77.5
	Doripenem	0.06	0.12	0.03–0.25	100
	Imipenem	0.5	2	0.06–2	87.3
	Meropenem	0.03	0.06	0.015–0.25	100
	Amikacin	2	8	≤0.25–>32	94.4
	Colistin (n=40)[e]	0.5	1	≤0.12–2	100
	Tigecycline	0.5	1	0.12–2	100
	Levofloxacin	0.06	4	≤0.03–>4	87.3
Ceftazidime non-susceptible (13)[d]	Ceftazidime-avibactam	0.5	1	0.25–1	100
	Ceftazidime	128	>128	16–>128	0
	Cefepime	1	4	≤0.12–8	76.9
	Aztreonam	32	64	0.5–>128	7.7
	Piperacillin-tazobactam	64	>128	8–>128	15.4
	Doripenem	0.06	0.25	0.06–0.25	100
	Imipenem	0.5	1	0.25–2	92.3
	Meropenem	0.06	0.12	0.03–0.25	100
	Amikacin	2	>32	1–>32	69.2
	Colistin (n=3)[e]	—[b]	—	0.5–1	100
	Tigecycline	0.5	2	0.25–2	100
	Levofloxacin	0.5	>4	0.12–>4	61.5
Multidrug-resistant (4)[d]	Ceftazidime-avibactam	—[b]	—	0.12–1	100
	Ceftazidime	—	—	4–>128	25.0
	Cefepime	—	—	1–16	50.0
	Aztreonam	—	—	32–64	0
	Piperacillin-tazobactam	—	—	32–>128	0
	Doripenem	—	—	0.03–0.12	100
	Imipenem	—	—	0.25–0.5	100
	Meropenem	—	—	0.03–0.06	100
	Amikacin	—	—	4–>32	25.0
	Colistin (n=0)[e]	—	—	ND[e]	ND
	Tigecycline	—	—	0.5–1	100
	Levofloxacin	—	—	0.25–>4	75.0
Proteeae[j]					
All (180)[d,k]	Ceftazidime-avibactam	0.06	0.12	≤0.015–1	100
	Ceftazidime	0.06	4	0.03–>128	93.9
	Cefepime	≤0.12	4	≤0.12–>16	86.1
	Aztreonam	≤0.015	2	≤0.015–128	96.1
	Piperacillin-tazobactam	0.5	2	≤0.25–>128	96.7
	Doripenem	0.25	0.5	0.06–2	99.4
	Imipenem	2	4	0.25–8	27.2
	Meropenem	0.12	0.12	0.03–1	100
	Amikacin	4	8	≤0.25–>32	96.7
	Colistin (n=97)[e]	>4	>4	>4–>4	0
	Tigecycline	2	4	0.25–8	65.0
	Levofloxacin	0.12	>4	≤0.03–>4	72.2
Ceftazidime-non-susceptible (11)[d]	Ceftazidime-avibactam	0.06	0.5	0.03–1	100
	Ceftazidime	16	32	8–>128	0
	Cefepime	≤0.12	4	≤0.12–>16	72.7
	Aztreonam	2	16	0.25–128	81.8
	Piperacillin-tazobactam	2	8	0.5–128	90.9

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Doripenem	0.25	0.5	0.12–0.5	100
	Imipenem	2	2	1–4	9.1
	Meropenem	0.12	0.12	0.06–0.25	100
	Amikacin	4	32	0.5–>32	81.8
	Colistin (n=5)[e]	—[b]	—	>4–>4	0
	Tigecycline	4	8	1–8	36.4
	Levofloxacin	>4	>4	≤0.03–>4	18.2
Multidrug-resistant (11)[d]	Ceftazidime-avibactam	0.06	0.12	0.03–0.12	100
	Ceftazidime	2	16	0.12–>128	81.8
	Cefepime	>16	>16	0.25–>16	9.1
	Aztreonam	4	32	≤0.015–128	54.6
	Piperacillin-tazobactam	1	128	≤0.25–>128	81.8
	Doripenem	0.25	0.25	0.06–2	90.9
	Imipenem	2	4	0.25–8	27.3
	Meropenem	0.06	0.12	0.06–1	100
	Amikacin	8	32	1–>32	81.8
	Colistin (n=9)[e]	—[b]	—	>4–>4	0
	Tigecycline	4	8	2–8	45.5
	Levofloxacin	>4	>4	1–>4	9.1
Other *Enterobacteriaceae*[g]					
All (39)[d,l]	Ceftazidime-avibactam	0.25	0.5	0.06–>128	97.4
	Ceftazidime	0.25	8	0.06–>128	87.2
	Cefepime	≤0.12	>16	≤0.12–>16	84.6
	Aztreonam	0.12	64	0.03–>128	79.5
	Piperacillin-tazobactam	2	>128	1–>128	84.6
	Doripenem	0.12	0.25	0.03–>4	94.9
	Imipenem	0.5	2	0.06–>8	89.7
	Meropenem	0.06	0.12	0.03–>8	94.9
	Amikacin	2	32	1–>32	84.6
	Colistin (n=21)[e]	>4	>4	0.5–>4	28.6
	Tigecycline	1	2	0.25–2	100
	Levofloxacin	0.12	1	≤0.03–2	100
Ceftazidime-non-susceptible (5)[d]	Ceftazidime-avibactam	—[b]	—	0.25–>128	80.0
	Ceftazidime	—	—	8–>128	0
	Cefepime	—	—	0.5–>16	20.0
	Aztreonam	—	—	16–>128	0
	Piperacillin-tazobactam	—	—	16–>128	20.0
	Doripenem	—	—	0.06–>4	80.0
	Imipenem	—	—	0.25–>8	80.0
	Meropenem	—	—	0.06–>8	80.0
	Amikacin	—	—	2–>32	40.0
	Colistin (n=2)[e]	—	—	1–>4	50.0
	Tigecycline	—	—	1–2	100
	Levofloxacin	—	—	0.12–2	100
Meropenem non-susceptible (2)[d]	Ceftazidime-avibactam	—[b]	—	0.5–0.5	100
	Ceftazidime	—	—	2–8	50.0
	Cefepime	—	—	1–16	50.0
	Aztreonam	—	—	4–128	50.0
	Piperacillin-tazobactam	—	—	64–128	0
	Doripenem	—	—	2–>4	0
	Imipenem	—	—	>8–>8	0
	Meropenem	—	—	2–>8	0
	Amikacin	—	—	2–2	100
	Colistin (n=2)[e]	—	—	>4–>4	0
	Tigecycline	—	—	0.5–1	100
	Levofloxacin	—	—	0.12–0.25	100
Multidrug-resistant (5)[d]	Ceftazidime-avibactam	—[b]	—	0.5–1	100
	Ceftazidime	—	—	1–8	40.0
	Cefepime	—	—	16–>16	0

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Aztreonam	—	—	64–128	0
	Piperacillin-tazobactam	—	—	16–>128	20.0
	Doripenem	—	—	0.12–>4	80.0
	Imipenem	—	—	0.25–>8	80.0
	Meropenem	—	—	0.06–>8	80.0
	Amikacin	—	—	2–>32	20.0
	Colistin (n=2)[e]	—	—	>4–>4	0
	Tigecycline	—	—	1–2	100
	Levofloxacin	—	—	0.25–2	100
Pseudomonas aeruginosa					
All (282)	Ceftazidime-avibactam	2	8	0.25–>128	94.7
	Ceftazidime	4	32	0.25–>128	76.2
	Cefepime	4	>16	0.25–>16	77.7
	Aztreonam	8	32	0.12–>128	58.2
	Piperacillin-tazobactam	8	>128	≤0.25–>128	65.3
	Doripenem	1	>4	0.06–>4	69.2
	Imipenem	2	>8	0.25–>8	61.7
	Meropenem	0.5	>8	≤0.06–>8	65.3
	Amikacin	4	>32	≤0.25–>32	83.0
	Colistin (n=210)[e]	2	2	0.5–8	96.2
	Levofloxacin	1	>4	≤0.03–>4	63.8
All, MBL-negative (280)	Ceftazidime-avibactam	2	8	0.25–32	95.4
	Ceftazidime	4	32	0.25–128	76.8
	Cefepime	4	>16	0.25–>16	78.2
	Aztreonam	8	32	0.12–>128	57.9
	Piperacillin-tazobactam	8	>128	≤0.25–>128	65.4
	Doripenem	1	>4	0.06–>4	69.6
	Imipenem	2	>8	0.25–>8	62.1
	Meropenem	0.5	>8	≤0.06–>8	65.7
	Amikacin	4	>32	≤0.25–>32	83.2
	Colistin (n=209)[e]	2	2	0.5–8	96.2
	Levofloxacin	1	>4	≤0.03–>4	64.3
Ceftazidime-non-susceptible (67)	Ceftazidime-avibactam	8	16	1–>128	77.6
	Ceftazidime	32	64	16–>128	0
	Cefepime	>16	>16	0.25–>16	16.4
	Aztreonam	32	128	4–>128	7.5
	Piperacillin-tazobactam	>128	>128	8–>128	3.0
	Doripenem	>4	>4	0.12–>4	23.9
	Imipenem	4	>8	1–>8	38.8
	Meropenem	8	>8	≤0.06–>8	20.9
	Amikacin	32	>32	2–>32	44.8
	Colistin (n=49)[e]	2	2	0.5–8	93.9
	Levofloxacin	>4	>4	0.25–>4	20.9
Ceftazidime-non-susceptible, MBL-negative (65)	Ceftazidime-avibactam	8	16	1–32	80.0
	Ceftazidime	32	64	16–128	0
	Cefepime	>16	>16	0.25–>16	16.9
	Aztreonam	32	128	4–>128	4.6
	Piperacillin-tazobactam	>128	>128	8–>128	1.5
	Doripenem	>4	>4	0.12–>4	24.6
	Imipenem	4	>8	1–>8	40.0
	Meropenem	8	>8	≤0.06–>8	21.5
	Amikacin	32	>32	2–>32	44.6
	Colistin (n=48)[e]	2	2	0.5–8	93.8
	Levofloxacin	>4	>4	0.25–>4	21.5
Meropenem non-susceptible (98)	Ceftazidime-avibactam	4	16	1–>128	84.7
	Ceftazidime	16	64	2–>128	45.9
	Cefepime	16	>16	0.25–>16	49.0
	Aztreonam	32	64	4–>128	17.4
	Piperacillin-tazobactam	64	>128	4–>128	30.6

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Doripenem	>4	>4	1–>4	12.2
	Imipenem	>8	>8	2–>8	19.4
	Meropenem	8	>8	4–>8	0
	Amikacin	8	>32	2–>32	59.2
	Colistin (n=70)[e]	2	2	1–8	97.1
	Levofloxacin	>4	>4	0.25–>4	29.6
Meropenem-non-susceptible, MBL-negative (96)	Ceftazidime-avibactam	4	16	1–32	86.5
	Ceftazidime	16	64	2–128	46.9
	Cefepime	8	>16	0.25–>16	50.0
	Aztreonam	32	64	4–>128	15.6
	Piperacillin-tazobactam	64	>128	4–>128	30.2
	Doripenem	>4	>4	1–>4	12.5
	Imipenem	>8	>8	2–>8	19.8
	Meropenem	8	>8	4–>8	0
	Amikacin	8	>32	2–>32	59.4
	Colistin (n=69)[e]	2	2	1–8	97.1
	Levofloxacin	>4	>4	0.25–>4	30.2
Colistin-resistant (1)[d]	Ceftazidime-avibactam	—[b]	—	4	100
	Ceftazidime	—	—	16	0
	Cefepime	—	—	>16	0
	Aztreonam	—	—	16	0
	Piperacillin-tazobactam	—	—	>128	0
	Doripenem	—	—	2	100
	Imipenem	—	—	2	100
	Meropenem	—	—	8	0
	Amikacin	—	—	>32	0
	Colistin (n=1)[e]	—	—	8	0
	Levofloxacin	—	—	>4	0
Multidrug-resistant (67)	Ceftazidime-avibactam	8	16	1–>128	77.6
	Ceftazidime	32	64	4–>128	16.4
	Cefepime	>16	>16	0.25–>16	17.9
	Aztreonam	32	128	4–>128	4.5
	Piperacillin-tazobactam	>128	>128	8–>128	6.0
	Doripenem	>4	>4	0.25–>4	13.4
	Imipenem	>8	>8	1–>8	34.3
	Meropenem	8	>8	0.25–>8	10.5
	Amikacin	>32	>32	2–>32	38.8
	Colistin (n=46)[e]	2	2	1–8	97.8
	Levofloxacin	>4	>4	0.25–>4	4.5
Multidrug-resistant, MBL-negative (65)	Ceftazidime-avibactam	8	16	1–32	80.0
	Ceftazidime	32	64	4–128	16.9
	Cefepime	>16	>16	0.25–>16	18.5
	Aztreonam	32	128	4–>128	1.5
	Piperacillin-tazobactam	>128	>128	8–>128	4.6
	Doripenem	>4	>4	0.25–>4	13.9
	Imipenem	>8	>8	1–>8	35.4
	Meropenem	8	>8	0.25–>8	10.8
	Amikacin	>32	>32	2–>32	38.5
	Colistin (n=45)[e]	2	2	1–8	97.8
	Levofloxacin	>4	>4	0.25–>4	4.6

[a] MBL-negative, no gene encoding a metallo-β-lactamase was detected by polymerase chain reaction assay.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] All isolates were MBL-negative.

[e] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only. ND, not determined; MIC range and % susceptible were not determined for n=0 isolates.

[f] Excluded isolates of Proteeae and *Serratia* spp., which are intrinsically resistant to colistin.

[g] No colistin-resistant isolates were collected.

[h] *Enterobacter* spp. included *Enterobacter aerogenes* (n=48), *Enterobacter asburiae* (n=2), *Enterobacter cloacae* (n=81), and *Enterobacter kobei* (n=5).

[i] *Citrobacter* spp. included *Citrobacter amalonaticus* (n=1), *Citrobacter braakii* (n=2), *Citrobacter farmeri* (n=1), *Citrobacter freundii* (n=45), and *Citrobacter koseri* (n=22).

[j] No meropenem non-susceptible isolates were collected.

[k] Proteeae included *Morganella morganii* (n=34), *Proteus mirabilis* (n=85), *Proteus penneri* (n=4), *Proteus vulgaris* (n=40), *Providencia rettgeri* (n=6), and *Providencia stuartii* (n=11).

[l] Other *Enterobacteriaceae* included *Raoultella ornithinolytica* (n=7), *Serratia marcescens* (n=31), and *Serratia ureilytica* (n=1).

Table S2B. Argentina - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 427 isolates of β-lactamase-positive *Enterobacteriaceae* (n=312) and *P. aeruginosa* (n=115) collected as part of the INFORM global surveillance program in 2012–2015.

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae (312)					
OSBL-positive (14)	Ceftazidime-avibactam	0.12	0.25	0.06–0.5	100
	Ceftazidime	4	32	0.06–32	57.1
	Cefepime	0.5	16	≤0.12–>16	85.7
	Aztreonam	0.5	16	≤0.015–64	71.4
	Piperacillin-tazobactam	>128	>128	≤0.25–>128	21.4
	Doripenem	0.06	0.5	0.03–1	100
	Imipenem	0.25	1	0.12–8	92.9
	Meropenem	0.03	0.25	0.03–2	92.9
	Amikacin	1	4	1–16	100
	Colistin (n=9)[d]	—[b]	—	0.25–>4	88.9
	Tigecycline	0.5	1	0.25–4	92.9
	Levofloxacin	0.12	>4	0.06–>4	64.3
ESBL-positive (168)[e]	Ceftazidime-avibactam	0.25	1	≤0.015–4	100
	Ceftazidime	32	>128	0.25–>128	17.9
	Cefepime	>16	>16	≤0.12–>16	8.3
	Aztreonam	64	>128	1–>128	8.3
	Piperacillin-tazobactam	32	>128	0.5–>128	47.6
	Doripenem	0.06	0.12	0.015–>4	99.4
	Imipenem	0.25	0.5	0.06–>8	94.0
	Meropenem	0.06	0.12	0.015–>8	98.8
	Amikacin	4	32	1–>32	85.1
	Colistin (n=82)[d]	0.5	>4	0.25–>4	87.8
	Tigecycline	1	2	0.06–8	91.1
	Levofloxacin	>4	>4	≤0.03–>4	35.1
AmpC-positive (39)[f]	Ceftazidime-avibactam	0.25	2	0.03–32	94.9
	Ceftazidime	32	>128	0.06–>128	43.6
	Cefepime	0.25	16	≤0.12–>16	82.1
	Aztreonam	8	128	≤0.015–>128	46.2
	Piperacillin-tazobactam	4	128	0.5–>128	66.7
	Doripenem	0.06	0.25	0.03–1	100
	Imipenem	2	2	0.12–8	48.7
	Meropenem	0.06	0.25	0.03–1	100
	Amikacin	2	16	1–>32	97.4
	Colistin (n=18)[d]	1	2	0.5–>4	94.4
	Tigecycline	0.5	2	0.12–4	94.9
	Levofloxacin	0.5	>4	≤0.03–>4	64.1
ESBL-positive + AmpC-positive (4)[g]	Ceftazidime-avibactam	—[b]	—	0.25–2	100
	Ceftazidime	—	—	64–>128	0
	Cefepime	—	—	16–>16	0
	Aztreonam	—	—	64–>128	0
	Piperacillin-tazobactam	—	—	16–>128	25.0
	Doripenem	—	—	0.12–0.25	100
	Imipenem	—	—	0.06–0.25	100
	Meropenem	—	—	0.06–0.25	100
	Amikacin	—	—	2–32	75.0
	Colistin (n=0)[d]	—	—	ND[d]	ND
	Tigecycline	—	—	0.5–2	100
	Levofloxacin	—	—	>4–>4	0
KPC-positive (77)[h]	Ceftazidime-avibactam	0.5	2	0.03–16	98.7

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Ceftazidime	64	>128	2–>128	2.6
	Cefepime	>16	>16	≤0.12–>16	5.2
	Aztreonam	>128	>128	4–>128	1.3
	Piperacillin-tazobactam	>128	>128	64–>128	0
	Doripenem	>4	>4	0.5–>4	5.2
	Imipenem	>8	>8	0.5–>8	1.3
	Meropenem	>8	>8	0.5–>8	3.9
	Amikacin	16	>32	0.5–>32	53.2
	Colistin (n=47)[d]	1	>4	0.25–>4	66.0
	Tigecycline	1	2	0.12–4	97.4
	Levofloxacin	>4	>4	0.12–>4	10.4
OXA-48-like-positive (10)[i]	Ceftazidime-avibactam	1	2	0.06–8	90.0
	Ceftazidime	128	>128	16–>128	0
	Cefepime	>16	>16	2–>16	10.0
	Aztreonam	64	64	1–>128	10.0
	Piperacillin-tazobactam	>128	>128	64–>128	0
	Doripenem	0.12	>4	0.06–>4	80.0
	Imipenem	0.5	1	0.12–2	90.0
	Meropenem	0.12	>8	0.03–>8	80.0
	Amikacin	8	32	1–>32	70.0
	Colistin (n=9)[d]	—[b]	—	0.5–1	100
	Tigecycline	1	1	0.12–2	100
	Levofloxacin	>4	>4	0.06–>4	20.0
P. aeruginosa (115)					
OSBL-positive (1)[j]	Ceftazidime-avibactam	—[b]	—	4	100
	Ceftazidime	—	—	4	100
	Cefepime	—	—	8	100
	Aztreonam	—	—	32	0
	Piperacillin-tazobactam	—	—	64	0
	Doripenem	—	—	>4	0
	Imipenem	—	—	>8	0
	Meropenem	—	—	>8	0
	Amikacin	—	—	>32	0
	Colistin (n=0)[d]	—	—	ND[d]	ND
	Levofloxacin	—	—	>4	0
ESBL-positive (1)[j,k]	Ceftazidime-avibactam	—[b]	—	8	100
	Ceftazidime	—	—	128	0
	Cefepime	—	—	16	0
	Aztreonam	—	—	16	0
	Piperacillin-tazobactam	—	—	64	0
	Doripenem	—	—	2	100
	Imipenem	—	—	>8	0
	Meropenem	—	—	4	0
	Amikacin	—	—	>32	0
	Colistin (n=1)[d]	—	—	4	0
	Levofloxacin	—	—	2	100
KPC-positive (3)[j,l]	Ceftazidime-avibactam	—[b]	—	4–8	100
	Ceftazidime	—	—	64–128	0
	Cefepime	—	—	0.5–>16	33.3
	Aztreonam	—	—	>128–>128	0
	Piperacillin-tazobactam	—	—	>128–>128	0
	Doripenem	—	—	>4–>4	0
	Imipenem	—	—	>8–>8	0
	Meropenem	—	—	>8–>8	0
	Amikacin	—	—	4–16	100
	Colistin (n=2)[d]	—	—	1–2	100
	Levofloxacin	—	—	>4–>4	0
MBL-positive (2)[j,m]	Ceftazidime-avibactam	—[b]	—	64–>128	0

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Ceftazidime	—	—	64–>128	0
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	4–8	100
	Piperacillin-tazobactam	—	—	16–>128	50.0
	Doripenem	—	—	>4–>4	0
	Imipenem	—	—	>8–>8	0
	Meropenem	—	—	>8–>8	0
	Amikacin	—	—	8–>32	50.0
	Colistin (n=1)[d]	—	—	2	100
	Levofloxacin	—	—	>4–>4	0
No acquired β-lactamase detected (108)[j]	Ceftazidime-avibactam	4	16	0.5–32	88.0
	Ceftazidime	8	64	1–128	55.6
	Cefepime	8	>16	0.25–>16	57.4
	Aztreonam	32	64	0.25–>128	28.7
	Piperacillin-tazobactam	32	>128	≤0.25–>128	40.7
	Doripenem	4	>4	0.12–>4	25.9
	Imipenem	>8	>8	2–>8	17.6
	Meropenem	8	>8	≤0.06–>8	15.7
	Amikacin	8	>32	1–>32	64.8
	Colistin (n=75)[d]	2	2	1–8	98.7
	Levofloxacin	>4	>4	≤0.03–>4	35.2

[a] OSBL, original-spectrum β-lactamase (e.g., TEM-1, SHV-1, SHV-11); ESBL, extended-spectrum β-lactamase; MBL, metallo-β-lactamase.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only. ND, not determined; MIC range and % susceptible were not determined for n=0 isolates.

[e] Included isolates carrying CTX-M-2; CTX-M-14; CTX-M-15; CTX-M-3 and SHV-2; CTX-M-3 and SHV-5; CTX-M-3 and SHV-12; CTX-M-14 and CTX-M-15; CTX-M-15 and CTX-M-2; CTX-M-15 and SHV-5; CTX-M-15 and SHV-7; SHV-2; SHV-2A; SHV-5; SHV-12; SHV-18; SHV-28; TEM-28; GES-7; and the chromosomal ESBL common to *K. oxytoca*, with or without a SHV-OSBL and/or TEM-OSBL.

[f] Included isolates carrying CMY-2; CMY-132; CMY-type; or the chromosomal AmpCs common to *Citrobacter* spp., *Enterobacter* spp., *M. morganii*, and *Serratia* spp. with or without a TEM-OSBL.

[g] Included isolates carrying the chromosomal AmpC common to *Enterobacter* spp. and CTX-M-2, CTX-M-15 or SHV-5 with a TEM-OSBL.

[h] Included isolates carrying KPC-2; KPC-3; KPC-2 and CTX-M-2; KPC-2 and CTX-M-15; KPC-2 and SHV-12; KPC-3 and SHV-12; KPC-2 and CTX-M-2 and OXA-163; with and without the chromosomal β–lactamases common to *Enterobacter* spp., *M. morganii*, *S. marcescens* and *K. oxytoca*, a SHV-OSBL, and/or TEM-OSBL.

[i] Included isolates carrying OXA-439; OXA-163; OXA-163 and CTX-M-15; OXA-163 and SHV-2A; OXA-163 and the chromosomal AmpC common to *Enterobacter* spp.; with and without a SHV-OSBL and/or TEM-OSBL.

[j] Assumed to carry the chromosomal AmpC common to *P. aeruginosa*.

[k] Isolate carrying GES-1.

[l] Isolates carrying KPC-2.

[m] Isolates carrying IMP-16 or VIM-2.

Table S3A. Brazil - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 1,391 isolates of *Enterobacteriaceae* and *P. aeruginosa* collected as part of the INFORM global surveillance program in 2012-2015.

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae					
All (1,115)[d]	Ceftazidime-avibactam	0.12	1	≤0.015–>128	99.9
	Ceftazidime	0.25	128	0.03–>128	71.8
	Cefepime	≤0.12	>16	≤0.12–>16	67.6
	Aztreonam	0.12	128	≤0.015–>128	67.7
	Piperacillin-tazobactam	2	>128	≤0.25–>128	78.0
	Doripenem	0.06	1	≤0.008–>4	90.2
	Imipenem	0.25	4	≤0.03–>8	79.9
	Meropenem	0.03	2	0.015–>8	89.8
	Amikacin	2	8	≤0.25–>32	96.8
	Colistin (n=711)[e]	1	>4	≤0.12–>4	83.1
	Tigecycline	0.5	2	≤0.015–8	95.2
	Levofloxacin	0.25	>4	≤0.03–>4	62.6
Ceftazidime non-susceptible (314)[d]	Ceftazidime-avibactam	0.5	2	≤0.015–>128	99.7
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	13.7
	Aztreonam	128	>128	0.12–>128	2.6
	Piperacillin-tazobactam	128	>128	≤0.25–>128	28.3
	Doripenem	0.12	>4	0.03–>4	66.9
	Imipenem	0.5	>8	0.06–>8	65.3
	Meropenem	0.12	>8	0.015–>8	65.0
	Amikacin	4	16	0.5–>32	90.5
	Colistin (n=185)[e]	1	>4	≤0.12–>4	86.0
	Tigecycline	0.5	2	0.06–8	94.9
	Levofloxacin	>4	>4	≤0.03–>4	23.3
Meropenem non-susceptible (114)[d]	Ceftazidime-avibactam	1	2	0.06–>128	99.1
	Ceftazidime	64	>128	0.12–>128	3.5
	Cefepime	>16	>16	≤0.12–>16	5.3
	Aztreonam	>128	>128	0.06–>128	3.5
	Piperacillin-tazobactam	>128	>128	1–>128	4.4
	Doripenem	>4	>4	0.12–>4	6.1
	Imipenem	>8	>8	0.25–>8	10.5
	Meropenem	>8	>8	2–>8	0
	Amikacin	4	>32	0.5–>32	80.7
	Colistin (n=72)[e]	1	>4	0.25–>4	73.6
	Tigecycline	1	2	0.25–8	91.2
	Levofloxacin	>4	>4	≤0.03–>4	8.8
Colistin-resistant (23) [d,f]	Ceftazidime-avibactam	0.5	2	0.06–>128	95.7
	Ceftazidime	64	>128	0.12–>128	13.0
	Cefepime	>16	>16	≤0.12–>16	17.4
	Aztreonam	>128	>128	0.12–>128	13.0
	Piperacillin-tazobactam	>128	>128	2–>128	21.7
	Doripenem	>4	>4	0.03–>4	17.4
	Imipenem	>8	>8	0.25–>8	17.4
	Meropenem	>8	>8	0.03–>8	17.4
	Amikacin	4	32	1–>32	78.3
	Colistin (n=23)[e]	>4	>4	4–>4	0
	Tigecycline	1	4	0.25–4	87.0
	Levofloxacin	>4	>4	0.06–>4	17.4
Multidrug-resistant (260)[d]	Ceftazidime-avibactam	0.5	2	0.06–>128	99.6
	Ceftazidime	64	>128	0.12–>128	6.9
	Cefepime	>16	>16	≤0.12–>16	0.8

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Aztreonam	128	>128	≤0.015–>128	1.2
	Piperacillin-tazobactam	>128	>128	≤0.25–>128	26.9
	Doripenem	0.25	>4	0.015–>4	60.0
	Imipenem	0.5	>8	0.06–>8	60.4
	Meropenem	0.25	>8	0.015–>8	58.9
	Amikacin	4	32	0.5–>32	87.7
	Colistin (n=149)[e]	1	>4	≤0.12–>4	81.2
	Tigecycline	1	2	≤0.015–8	93.9
	Levofloxacin	>4	>4	0.06–>4	5.8
Escherichia coli[g]					
All (416)[d]	Ceftazidime-avibactam	0.12	0.25	≤0.015–4	100
	Ceftazidime	0.25	16	0.03–>128	86.3
	Cefepime	≤0.12	>16	≤0.12–>16	73.3
	Aztreonam	0.12	32	≤0.015–>128	77.9
	Piperacillin-tazobactam	2	16	0.5–>128	93.5
	Doripenem	0.03	0.06	≤0.008–>4	99.0
	Imipenem	0.12	0.25	≤0.03–8	98.8
	Meropenem	0.03	0.06	0.015–8	99.0
	Amikacin	2	8	0.5–32	99.8
	Colistin (n=266)[e]	0.5	1	≤0.12–2	100
	Tigecycline	0.25	0.5	≤0.015–2	100
	Levofloxacin	0.5	>4	≤0.03–>4	58.4
Ceftazidime non-susceptible (57)[d]	Ceftazidime-avibactam	0.25	1	≤0.015–4	100
	Ceftazidime	32	128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	14.0
	Aztreonam	64	128	4–>128	3.5
	Piperacillin-tazobactam	16	>128	2–>128	68.4
	Doripenem	0.03	0.12	0.03–>4	93.0
	Imipenem	0.25	0.5	0.06–8	94.7
	Meropenem	0.03	0.25	0.015–8	93.0
	Amikacin	4	16	1–16	100
	Colistin (n=31)[e]	0.5	1	≤0.12–2	100
	Tigecycline	0.25	0.5	0.06–2	100
	Levofloxacin	>4	>4	≤0.03–>4	14.0
Meropenem non-susceptible (4)[d]	Ceftazidime-avibactam	—[b]	—	0.5–4	100
	Ceftazidime	—	—	16–32	0
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	64–>128	0
	Piperacillin-tazobactam	—	—	>128–>128	0
	Doripenem	—	—	2–>4	0
	Imipenem	—	—	1–8	50.0
	Meropenem	—	—	4–8	0
	Amikacin	—	—	4–8	100
	Colistin (n=1)[e]	—	—	1	100
	Tigecycline	—	—	0.5–0.5	100
	Levofloxacin	—	—	>4–>4	0
Multidrug-resistant (54)[d]	Ceftazidime-avibactam	0.25	1	0.06–4	100
	Ceftazidime	16	128	1–>128	20.4
	Cefepime	>16	>16	4–>16	0
	Aztreonam	64	128	16–>128	0
	Piperacillin-tazobactam	16	>128	2–>128	68.5
	Doripenem	0.03	0.12	0.015–>4	92.6
	Imipenem	0.25	0.5	0.06–8	94.4
	Meropenem	0.03	0.25	0.015–8	92.6
	Amikacin	4	16	1–16	100
	Colistin (n=27)[e]	0.5	1	≤0.12–2	100
	Tigecycline	0.25	0.5	≤0.015–2	100
	Levofloxacin	>4	>4	0.5–>4	1.9
Klebsiella pneumoniae					

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
All (317)[d]	Ceftazidime-avibactam	0.25	2	≤0.015–>128	99.7
	Ceftazidime	16	>128	0.06–>128	42.9
	Cefepime	16	>16	≤0.12–>16	42.6
	Aztreonam	64	>128	≤0.015–>128	41.3
	Piperacillin-tazobactam	32	>128	0.5–>128	48.9
	Doripenem	0.06	>4	0.015–>4	69.7
	Imipenem	0.25	>8	0.06–>8	71.0
	Meropenem	0.06	>8	0.015–>8	67.8
	Amikacin	2	16	0.5–>32	91.2
	Colistin (n=207)[e]	1	2	0.25–>4	90.3
	Tigecycline	0.5	2	0.12–8	96.2
	Levofloxacin	>4	>4	≤0.03–>4	42.6
Ceftazidime non-susceptible (181)[d]	Ceftazidime-avibactam	0.5	2	0.06–>128	99.5
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	3.9
	Aztreonam	128	>128	16–>128	0
	Piperacillin-tazobactam	>128	>128	1–>128	14.4
	Doripenem	2	>4	0.03–>4	48.1
	Imipenem	2	>8	0.06–>8	49.7
	Meropenem	4	>8	0.03–>8	44.8
	Amikacin	4	32	0.5–>32	85.1
	Colistin (n=110)[e]	1	>4	0.25–>4	82.7
	Tigecycline	1	2	0.12–8	93.9
	Levofloxacin	>4	>4	≤0.03–>4	8.8
Meropenem non-susceptible (102)[d]	Ceftazidime-avibactam	1	2	0.12–>128	99.0
	Ceftazidime	64	>128	1–>128	2.0
	Cefepime	>16	>16	≤0.12–>16	3.9
	Aztreonam	>128	>128	0.5–>128	2.0
	Piperacillin-tazobactam	>128	>128	2–>128	2.9
	Doripenem	>4	>4	1–>4	5.9
	Imipenem	>8	>8	0.25–>8	9.8
	Meropenem	>8	>8	2–>8	0
	Amikacin	4	>32	0.5–>32	78.4
	Colistin (n=65)[e]	1	>4	0.25–>4	72.3
	Tigecycline	1	2	0.25–8	90.2
	Levofloxacin	>4	>4	≤0.03–>4	4.9
Colistin-resistant (20)[d]	Ceftazidime-avibactam	0.5	2	0.25–>128	95.0
	Ceftazidime	64	>128	0.5–>128	5.0
	Cefepime	>16	>16	≤0.12–>16	5.0
	Aztreonam	>128	>128	0.12–>128	5.0
	Piperacillin-tazobactam	>128	>128	4–>128	10.0
	Doripenem	>4	>4	0.06–>4	10.0
	Imipenem	>8	>8	0.25–>8	10.0
	Meropenem	>8	>8	0.06–>8	10.0
	Amikacin	4	32	1–>32	75.0
	Colistin (n=20)[e]	>4	>4	4–>4	0
	Tigecycline	1	4	0.5–4	85.0
	Levofloxacin	>4	>4	0.12–>4	5.0
Multidrug-resistant (168)[d]	Ceftazidime-avibactam	0.5	2	0.12–>128	99.4
	Ceftazidime	64	>128	4–>128	0.6
	Cefepime	>16	>16	≤0.12–>16	0.6
	Aztreonam	128	>128	16–>128	0
	Piperacillin-tazobactam	>128	>128	2–>128	11.9
	Doripenem	2	>4	0.03–>4	44.1
	Imipenem	4	>8	0.06–>8	47.0
	Meropenem	4	>8	0.03–>8	41.7
	Amikacin	4	32	0.5–>32	83.9
	Colistin (n=101)[e]	1	>4	0.25–>4	81.2
	Tigecycline	1	2	0.12–8	93.5
	Levofloxacin	>4	>4	0.06–>4	3.0

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Klebsiella oxytoca[g]					
All (39)[d]	Ceftazidime-avibactam	0.12	0.25	≤0.015–1	100
	Ceftazidime	0.12	4	0.03–>128	92.3
	Cefepime	≤0.12	4	≤0.12–>16	89.7
	Aztreonam	0.12	128	≤0.015–>128	87.2
	Piperacillin-tazobactam	2	128	1–>128	89.7
	Doripenem	0.06	0.06	0.03–>4	94.9
	Imipenem	0.25	0.5	0.12–8	94.9
	Meropenem	0.03	0.06	0.03–4	94.9
	Amikacin	1	2	1–16	100
	Colistin (n=28)[e]	0.5	1	0.25–1	100
	Tigecycline	0.25	1	0.25–2	100
	Levofloxacin	0.06	4	≤0.03–>4	89.7
Ceftazidime non-susceptible (3)[d]	Ceftazidime-avibactam	—[b]	—	0.25–1	100
	Ceftazidime	—	—	32–>128	0
	Cefepime	—	—	16–>16	0
	Aztreonam	—	—	128–>128	0
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	0.12–>4	33.3
	Imipenem	—	—	0.25–8	33.3
	Meropenem	—	—	0.12–4	33.3
	Amikacin	—	—	1–16	100
	Colistin (n=2)[e]	—	—	0.5–1	100
	Tigecycline	—	—	0.5–2	100
	Levofloxacin	—	—	0.06–>4	33.3
Meropenem non-susceptible (2)[d]	Ceftazidime-avibactam	—[b]	—	0.25–1	100
	Ceftazidime	—	—	32–64	0
	Cefepime	—	—	16–>16	0
	Aztreonam	—	—	128–>128	0
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	2–>4	0
	Imipenem	—	—	4–8	0
	Meropenem	—	—	4–4	0
	Amikacin	—	—	1–8	100
	Colistin (n=2)[e]	—	—	0.5–1	100
	Tigecycline	—	—	0.5–2	100
	Levofloxacin	—	—	0.06–>4	50.0
Multidrug-resistant (3)[d]	Ceftazidime-avibactam	—[b]	—	0.25–1	100
	Ceftazidime	—	—	32–>128	0
	Cefepime	—	—	16–>16	0
	Aztreonam	—	—	128–>128	0
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	0.12–>4	33.3
	Imipenem	—	—	0.25–8	33.3
	Meropenem	—	—	0.12–4	33.3
	Amikacin	—	—	1–16	100
	Colistin (n=2)[e]	—	—	0.5–1	100
	Tigecycline	—	—	0.5–2	100
	Levofloxacin	—	—	0.06–>4	33.3
Enterobacter spp.					
All (130)[d,h]	Ceftazidime-avibactam	0.25	1	0.06–2	100
	Ceftazidime	0.5	128	0.12–>128	60.0
	Cefepime	≤0.12	>16	≤0.12–>16	67.7
	Aztreonam	0.25	128	≤0.015–>128	58.5
	Piperacillin-tazobactam	4	>128	1–>128	68.5
	Doripenem	0.06	0.25	0.03–>4	96.2
	Imipenem	1	2	0.12–>8	79.2
	Meropenem	0.06	0.25	0.015–>8	95.4
	Amikacin	1	8	0.5–32	97.7

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Colistin (n=74)[e]	0.5	1	≤0.12–>4	96.0
	Tigecycline	0.5	2	0.25–4	98.5
	Levofloxacin	0.06	>4	≤0.03–>4	82.3
Ceftazidime non-susceptible (52)[d]	Ceftazidime-avibactam	0.5	2	0.12–2	100
	Ceftazidime	128	>128	16–>128	0
	Cefepime	16	>16	≤0.12–>16	26.9
	Aztreonam	64	128	8–>128	0
	Piperacillin-tazobactam	64	>128	4–>128	23.1
	Doripenem	0.12	0.5	0.03–4	92.3
	Imipenem	0.5	2	0.12–8	88.5
	Meropenem	0.12	0.5	0.015–8	92.3
	Amikacin	2	8	0.5–32	96.2
	Colistin (n=28)[e]	0.5	1	0.25–>4	96.4
	Tigecycline	1	2	0.25–4	96.2
	Levofloxacin	0.5	>4	≤0.03–>4	63.5
Meropenem non-susceptible (6)[d]	Ceftazidime-avibactam	—[b]	—	0.06–1	100
	Ceftazidime	—	—	0.12–128	33.3
	Cefepime	—	—	≤0.12–>16	33.3
	Aztreonam	—	—	0.06–>128	33.3
	Piperacillin-tazobactam	—	—	1–>128	33.3
	Doripenem	—	—	0.12–>4	16.7
	Imipenem	—	—	2–>8	0
	Meropenem	—	—	2–>8	0
	Amikacin	—	—	1–4	100
	Colistin (n=4)[e]	—	—	1–>4	75.0
	Tigecycline	—	—	0.5–2	100
	Levofloxacin	—	—	0.06–>4	66.7
Colistin-resistant (3)[d]	Ceftazidime-avibactam	—[b]	—	0.06–0.5	100
	Ceftazidime	—	—	0.12–32	66.7
	Cefepime	—	—	≤0.12–0.25	100
	Aztreonam	—	—	0.12–32	66.7
	Piperacillin-tazobactam	—	—	2–16	100
	Doripenem	—	—	0.03–>4	66.7
	Imipenem	—	—	0.5–>8	66.7
	Meropenem	—	—	0.03–>8	66.7
	Amikacin	—	—	1–2	100
	Colistin (n=3)[e]	—	—	>4–>4	0
	Tigecycline	—	—	0.25–1	100
	Levofloxacin	—	—	0.06–0.12	100
Multidrug-resistant (22)[d]	Ceftazidime-avibactam	1	2	0.12–2	100
	Ceftazidime	128	>128	16–>128	0
	Cefepime	>16	>16	4–>16	0
	Aztreonam	128	>128	32–>128	0
	Piperacillin-tazobactam	>128	>128	8–>128	13.6
	Doripenem	0.12	2	0.06–2	86.4
	Imipenem	0.5	8	0.12–8	86.4
	Meropenem	0.12	4	0.015–8	86.4
	Amikacin	4	16	1–32	90.9
	Colistin (n=9)[e]	—[b]	—	0.25–1	100
	Tigecycline	2	2	0.5–4	90.9
	Levofloxacin	>4	>4	0.5–>4	18.2
Citrobacter spp.[g,j]					
All (53)[d,i]	Ceftazidime-avibactam	0.12	0.5	≤0.015–1	100
	Ceftazidime	0.5	128	0.12–>128	81.1
	Cefepime	≤0.12	8	≤0.12–>16	86.8
	Aztreonam	0.12	32	0.03–128	77.4
	Piperacillin-tazobactam	4	64	1–>128	83.0
	Doripenem	0.03	0.12	0.03–0.5	100
	Imipenem	0.5	1	0.06–2	92.5

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Meropenem	0.03	0.06	0.015–0.25	100
	Amikacin	2	8	0.5–32	98.1
	Colistin (n=37)[e]	1	1	≤0.12–2	100
	Tigecycline	0.25	1	0.12–2	100
	Levofloxacin	0.06	2	≤0.03–>4	90.6
Ceftazidime non-susceptible (10)[d]	Ceftazidime-avibactam	0.5	0.5	0.12–0.5	100
	Ceftazidime	128	128	8–>128	0
	Cefepime	1	>16	≤0.12–>16	70.0
	Aztreonam	32	64	2–128	10.0
	Piperacillin-tazobactam	64	128	2–>128	30.0
	Doripenem	0.06	0.12	0.03–0.12	100
	Imipenem	0.5	1	0.5–1	100
	Meropenem	0.06	0.06	0.03–0.12	100
	Amikacin	2	8	1–16	100
	Colistin (n=8)[e]	—[b]	—	0.25–2	100
	Tigecycline	0.5	2	0.25–2	100
	Levofloxacin	0.12	2	0.06–>4	90.0
Multidrug-resistant (2)[d]	Ceftazidime-avibactam	—[b]	—	0.5–0.5	100
	Ceftazidime	—	—	128–128	0
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	64–128	0
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	0.12–0.12	100
	Imipenem	—	—	0.5–1	100
	Meropenem	—	—	0.06–0.06	100
	Amikacin	—	—	8–16	100
	Colistin (n=1)[e]	—	—	1	100
	Tigecycline	—	—	1–2	100
	Levofloxacin	—	—	2–>4	50.0
Proteeae[j]					
All (128)[d,k]	Ceftazidime-avibactam	0.03	0.12	≤0.015–0.5	100
	Ceftazidime	0.06	4	0.03–16	93.8
	Cefepime	≤0.12	2	≤0.12–>16	90.6
	Aztreonam	≤0.015	0.5	≤0.015–16	95.3
	Piperacillin-tazobactam	≤0.25	1	≤0.25–8	100
	Doripenem	0.25	0.5	0.03–4	98.4
	Imipenem	2	4	0.12–8	30.5
	Meropenem	0.06	0.25	0.03–1	100
	Amikacin	4	8	≤0.25–>32	99.2
	Colistin (n=81)[e]	>4	>4	>4–>4	0
	Tigecycline	2	4	0.5–8	71.1
	Levofloxacin	0.06	>4	≤0.03–>4	78.9
Ceftazidime-non-susceptible (8)[d]	Ceftazidime-avibactam	—[b]	—	0.03–0.5	100
	Ceftazidime	—	—	8–16	0
	Cefepime	—	—	≤0.12–>16	62.5
	Aztreonam	—	—	0.12–16	62.5
	Piperacillin-tazobactam	—	—	≤0.25–8	100
	Doripenem	—	—	0.06–1	100
	Imipenem	—	—	0.25–4	25.0
	Meropenem	—	—	0.06–0.25	100
	Amikacin	—	—	1–4	100
	Colistin (n=4)[e]	—	—	>4–>4	0
	Tigecycline	—	—	1–8	62.5
	Levofloxacin	—	—	≤0.03–>4	37.5
Multidrug-resistant (8)[d]	Ceftazidime-avibactam	—[b]	—	0.06–0.5	100
	Ceftazidime	—	—	0.12–16	62.5
	Cefepime	—	—	16–>16	0
	Aztreonam	—	—	≤0.015–16	37.5
	Piperacillin-tazobactam	—	—	≤0.25–8	100

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Doripenem	—	—	0.06–4	87.5
	Imipenem	—	—	0.25–8	37.5
	Meropenem	—	—	0.06–1	100
	Amikacin	—	—	1–>32	87.5
	Colistin (n=6)[e]	—	—	>4–>4	0
	Tigecycline	—	—	1–8	62.5
	Levofloxacin	—	—	0.5–>4	12.5
Other *Enterobacteriaceae*[g,j]					
All (32)[d,l]	Ceftazidime-avibactam	0.12	0.25	≤0.015–0.5	100
	Ceftazidime	0.25	2	0.12–32	90.6
	Cefepime	≤0.12	1	≤0.12–>16	90.6
	Aztreonam	0.12	64	0.03–64	84.4
	Piperacillin-tazobactam	2	8	0.5–128	93.8
	Doripenem	0.12	0.25	0.03–0.5	100
	Imipenem	1	2	0.25–2	84.4
	Meropenem	0.06	0.06	0.03–0.12	100
	Amikacin	2	8	1–>32	93.8
	Colistin (n=18)[e]	>4	>4	1–>4	11.1
	Tigecycline	1	2	0.25–4	90.6
	Levofloxacin	0.12	2	≤0.03–>4	90.6
Ceftazidime-non-susceptible (3)[d]	Ceftazidime-avibactam	—[b]	—	0.25–0.25	100
	Ceftazidime	—	—	16–32	0
	Cefepime	—	—	0.25–>16	66.7
	Aztreonam	—	—	16–64	0
	Piperacillin-tazobactam	—	—	8–128	33.3
	Doripenem	—	—	0.12–0.12	100
	Imipenem	—	—	1–2	66.7
	Meropenem	—	—	0.06–0.12	100
	Amikacin	—	—	8–>32	66.7
	Colistin (n=2)[e]	—	—	>4–>4	0
	Tigecycline	—	—	1–2	100
	Levofloxacin	—	—	0.12–2	100
Multidrug-resistant (3)[d]	Ceftazidime-avibactam	—[b]	—	0.25–0.25	100
	Ceftazidime	—	—	2–32	33.3
	Cefepime	—	—	0.25–>16	33.3
	Aztreonam	—	—	64–64	0
	Piperacillin-tazobactam	—	—	4–128	66.7
	Doripenem	—	—	0.12–0.12	100
	Imipenem	—	—	1–2	66.7
	Meropenem	—	—	0.06–0.12	100
	Amikacin	—	—	8–>32	33.3
	Colistin (n=3)[e]	—	—	>4–>4	0
	Tigecycline	—	—	1–2	100
	Levofloxacin	—	—	2–>4	66.7
Pseudomonas aeruginosa[g]					
All (276)	Ceftazidime-avibactam	2	8	0.25–>128	92.0
	Ceftazidime	4	64	0.5–>128	69.9
	Cefepime	4	>16	0.25–>16	73.9
	Aztreonam	16	64	0.25–>128	49.3
	Piperacillin-tazobactam	16	>128	≤0.25–>128	54.7
	Doripenem	1	>4	0.03–>4	68.5
	Imipenem	2	>8	0.25–>8	57.6
	Meropenem	1	>8	0.03–>8	66.7
	Amikacin	4	>32	0.5–>32	84.1
	Colistin (n=185)[e]	2	2	0.25–4	94.1
	Levofloxacin	1	>4	≤0.03–>4	65.2
All, MBL-negative (271)	Ceftazidime-avibactam	2	8	0.25–32	93.7
	Ceftazidime	4	64	0.5–>128	71.2
	Cefepime	4	>16	0.25–>16	75.3

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Aztreonam	16	64	0.25–>128	49.8
	Piperacillin-tazobactam	16	>128	≤0.25–>128	55.7
	Doripenem	1	>4	0.03–>4	69.7
	Imipenem	2	>8	0.25–>8	58.7
	Meropenem	1	>8	0.03–>8	67.9
	Amikacin	4	>32	0.5–>32	85.2
	Colistin (n=180)[e]	2	2	0.25–4	93.9
	Levofloxacin	1	>4	≤0.03–>4	66.1
Ceftazidime-non-susceptible (83)	Ceftazidime-avibactam	8	16	0.25–>128	73.5
	Ceftazidime	32	>128	16–>128	0
	Cefepime	16	>16	1–>16	32.5
	Aztreonam	32	128	4–>128	13.3
	Piperacillin-tazobactam	128	>128	4–>128	3.6
	Doripenem	>4	>4	0.03–>4	38.6
	Imipenem	>8	>8	1–>8	25.3
	Meropenem	>8	>8	0.12–>8	38.6
	Amikacin	8	>32	0.5–>32	72.3
	Colistin (n=53)[e]	2	2	0.5–4	96.2
	Levofloxacin	>4	>4	0.25–>4	39.8
Ceftazidime-non-susceptible, MBL-negative (78)	Ceftazidime-avibactam	8	16	0.25–32	78.2
	Ceftazidime	32	128	16–>128	0
	Cefepime	16	>16	1–>16	34.6
	Aztreonam	32	128	4–>128	12.8
	Piperacillin-tazobactam	128	>128	4–>128	3.9
	Doripenem	>4	>4	0.03–>4	41.0
	Imipenem	>8	>8	1–>8	26.9
	Meropenem	>8	>8	0.12–>8	41.0
	Amikacin	4	>32	0.5–>32	75.6
	Colistin (n=48)[e]	2	2	0.5–4	95.8
	Levofloxacin	>4	>4	0.25–>4	41.0
Meropenem non-susceptible (92)	Ceftazidime-avibactam	8	16	1–>128	78.3
	Ceftazidime	16	128	1–>128	44.6
	Cefepime	16	>16	2–>16	39.1
	Aztreonam	32	128	2–>128	12.0
	Piperacillin-tazobactam	64	>128	4–>128	18.5
	Doripenem	>4	>4	1–>4	5.4
	Imipenem	>8	>8	1–>8	3.3
	Meropenem	>8	>8	4–>8	0
	Amikacin	8	>32	0.5–>32	60.9
	Colistin (n=63)[e]	2	2	0.25–4	95.2
	Levofloxacin	>4	>4	0.25–>4	28.3
Meropenem non-susceptible, MBL-negative (87)	Ceftazidime-avibactam	8	16	1–32	82.8
	Ceftazidime	16	64	1–>128	47.1
	Cefepime	16	>16	2–>16	41.4
	Aztreonam	32	128	2–>128	11.5
	Piperacillin-tazobactam	64	>128	4–>128	19.5
	Doripenem	>4	>4	1–>4	5.8
	Imipenem	>8	>8	1–>8	3.5
	Meropenem	>8	>8	4–>8	0
	Amikacin	8	>32	0.5–>32	63.2
	Colistin (n=58)[e]	2	2	0.25–4	94.8
	Levofloxacin	>4	>4	0.25–>4	28.7
Multidrug-resistant (76)	Ceftazidime-avibactam	8	32	0.5–>128	72.4
	Ceftazidime	32	128	2–>128	30.3
	Cefepime	>16	>16	2–>16	17.1
	Aztreonam	32	128	8–>128	5.3
	Piperacillin-tazobactam	>128	>128	4–>128	6.6
	Doripenem	>4	>4	0.12–>4	17.1
	Imipenem	>8	>8	1–>8	11.8

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Meropenem	>8	>8	0.12–>8	14.5
	Amikacin	32	>32	0.5–>32	47.4
	Colistin (n=52)[e]	2	2	0.25–4	94.2
	Levofloxacin	>4	>4	0.5–>4	13.2
Multidrug-resistant, MBL-negative (71)	Ceftazidime-avibactam	8	16	0.5–32	77.5
	Ceftazidime	32	128	2–>128	32.4
	Cefepime	>16	>16	2–>16	18.3
	Aztreonam	64	128	8–>128	4.2
	Piperacillin-tazobactam	>128	>128	4–>128	7.0
	Doripenem	>4	>4	0.12–>4	18.3
	Imipenem	>8	>8	1–>8	12.7
	Meropenem	>8	>8	0.12–>8	15.5
	Amikacin	32	>32	0.5–>32	49.3
	Colistin (n=47)[e]	2	2	0.25–4	93.6
	Levofloxacin	>4	>4	0.5–>4	12.7

[a] MBL-negative, no gene encoding a metallo-β-lactamase was detected by polymerase chain reaction assay.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] All isolates were MBL-negative.

[e] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only.

[f] Excluded isolates of Proteeae and *Serratia* spp., which are intrinsically resistant to colistin.

[g] No colistin-resistant isolates were collected.

[h] *Enterobacter* spp. included *Enterobacter aerogenes* (n=46), *Enterobacter asburiae* (n=11), *Enterobacter cloacae* (n=69), and *Enterobacter kobei* (n=4).

[i] *Citrobacter* spp. included *Citrobacter amalonaticus* (n=2), *Citrobacter braakii* (n=1), *Citrobacter freundii* (n=36), and *Citrobacter koseri* (n=14).

[j] No meropenem non-susceptible isolates were collected.

[k] Proteeae included *Morganella morganii* (n=26), *Proteus mirabilis* (n=76), *Proteus penneri* (n=1), *Proteus vulgaris* (n=16), *Providencia rettgeri* (n=5), and *Providencia stuartii* (n=4).

[l] Other *Enterobacteriaceae* included *Raoultella ornithinolytica* (n=2) and *Serratia marcescens* (n=30).

Table S3B. Brazil - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 457 isolates of β-lactamase-positive *Enterobacteriaceae* (n=352) and *P. aeruginosa* (n=105) collected as part of the INFORM global surveillance program in 2012–2015.

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae (352)					
OSBL-positive (5)	Ceftazidime-avibactam	—[b]	—	0.06–0.5	100
	Ceftazidime	—	—	0.06–2	100
	Cefepime	—	—	≤0.12–>16	40.0
	Aztreonam	—	—	≤0.015–4	100
	Piperacillin-tazobactam	—	—	0.5–>128	80.0
	Doripenem	—	—	0.06–2	80.0
	Imipenem	—	—	0.12–8	60.0
	Meropenem	—	—	0.03–2	80.0
	Amikacin	—	—	2–32	80.0
	Colistin (n=0) [d]	—	—	ND[d]	ND
	Tigecycline	—	—	1–4	80.0
	Levofloxacin	—	—	0.06–>4	40.0
ESBL-positive (211)[e]	Ceftazidime-avibactam	0.25	1	≤0.015–>128	99.5
	Ceftazidime	32	>128	0.5–>128	34.6
	Cefepime	>16	>16	≤0.12–>16	6.2
	Aztreonam	64	>128	2–>128	14.7
	Piperacillin-tazobactam	16	>128	0.5–>128	59.7
	Doripenem	0.06	1	0.015–>4	92.4
	Imipenem	0.25	0.5	0.06–>8	95.7
	Meropenem	0.06	1	0.015–>8	91.0
	Amikacin	4	16	0.5–>32	96.7
	Colistin (n=113)[d]	1	1	≤0.12–>4	96.5
	Tigecycline	0.5	1	≤0.015–8	97.2
	Levofloxacin	>4	>4	≤0.03–>4	22.7
AmpC-positive (34)[f]	Ceftazidime-avibactam	0.25	2	0.06–2	100
	Ceftazidime	0.5	>128	0.12–>128	52.9
	Cefepime	0.25	4	≤0.12–16	76.5
	Aztreonam	0.25	128	0.03–128	58.8
	Piperacillin-tazobactam	4	>128	1–>128	70.6
	Doripenem	0.12	0.25	0.03–>4	91.2
	Imipenem	2	4	0.25–>8	32.4
	Meropenem	0.06	2	0.03–>8	88.2
	Amikacin	2	4	0.5–8	100
	Colistin (n=16)[d]	1	>4	0.25–>4	87.5
	Tigecycline	0.5	2	0.25–4	94.1
	Levofloxacin	0.12	>4	≤0.03–>4	73.5
ESBL-positive + AmpC-positive (11)[g]	Ceftazidime-avibactam	1	2	0.25–2	100
	Ceftazidime	>128	>128	32–>128	0
	Cefepime	>16	>16	16–>16	0
	Aztreonam	128	>128	64–>128	0
	Piperacillin-tazobactam	>128	>128	32–>128	0
	Doripenem	0.12	0.25	0.06–0.5	100
	Imipenem	0.5	1	0.25–1	100
	Meropenem	0.12	0.25	0.06–0.5	100
	Amikacin	4	8	1–32	90.9
	Colistin (n=2)[d]	—[b]	—	0.25–1	100
	Tigecycline	1	2	0.5–4	90.9
	Levofloxacin	>4	>4	0.5–>4	9.1
KPC-positive (89)[h]	Ceftazidime-avibactam	1	2	0.25–4	100
	Ceftazidime	32	>128	8–>128	0

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Cefepime	>16	>16	2–>16	2.2
	Aztreonam	>128	>128	32–>128	0
	Piperacillin-tazobactam	>128	>128	8–>128	1.1
	Doripenem	>4	>4	1–>4	3.4
	Imipenem	>8	>8	2–>8	0
	Meropenem	>8	>8	2–8	0
	Amikacin	4	>32	0.5–>32	77.5
	Colistin (n=62)[d]	1	>4	0.25–>4	72.6
	Tigecycline	1	4	0.25–8	89.9
	Levofloxacin	>4	>4	0.03–>4	5.6
OXA-48-like-positive (2)[i]	Ceftazidime-avibactam	—[b]	—	0.5–1	0
	Ceftazidime	—	—	64–128	0
	Cefepime	—	—	16–16	0
	Aztreonam	—	—	64–128	0
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	0.06–0.25	100
	Imipenem	—	—	0.12–1	100
	Meropenem	—	—	0.03–0.12	100
	Amikacin	—	—	2–4	100
	Colistin (n=0)[d]	—	—	ND[d]	ND
	Tigecycline	—	—	0.5–2	100
	Levofloxacin	—	—	4–>4	0
P. aeruginosa (105)					
ESBL-positive (1)[j,k]	Ceftazidime-avibactam	—[b]	—	8	100
	Ceftazidime	—	—	>128	0
	Cefepime	—	—	>16	0
	Aztreonam	—	—	>32	0
	Piperacillin-tazobactam	—	—	>128	0
	Doripenem	—	—	>4	0
	Imipenem	—	—	>8	0
	Meropenem	—	—	>8	0
	Amikacin	—	—	>32	0
	Colistin (n=1)[d]	—	—	1	100
	Levofloxacin	—	—	>4	0
MBL-positive (5)[j,l]	Ceftazidime-avibactam	—[b]	—	32–>128	0
	Ceftazidime	—	—	32–>128	0
	Cefepime	—	—	16–>16	0
	Aztreonam	—	—	8–64	20.0
	Piperacillin-tazobactam	—	—	32–>128	0
	Doripenem	—	—	>4–>4	0
	Imipenem	—	—	4–>8	0
	Meropenem	—	—	>8–>8	0
	Amikacin	—	—	8–>32	20.0
	Colistin (n=5)[d]	—	—	1–2	100
	Levofloxacin	—	—	1–>4	20.0
No acquired β-lactamase detected (99)[j]	Ceftazidime-avibactam	8	16	1–32	83.8
	Ceftazidime	16	64	1–>128	47.5
	Cefepime	16	>16	1–>16	43.3
	Aztreonam	32	64	0.5–>128	17.2
	Piperacillin-tazobactam	64	>128	1–>128	23.2
	Doripenem	>4	>4	0.12–>4	18.2
	Imipenem	>8	>8	1–>8	3.0
	Meropenem	>8	>8	0.12–>8	13.1
	Amikacin	8	>32	0.5–>32	65.7
	Colistin (n=64)[d]	2	2	0.25–4	93.8
	Levofloxacin	>4	>4	0.25–>4	33.3

[a] OSBL, original-spectrum β-lactamase (e.g. TEM-1, SHV-1, SHV-11); ESBL, extended-spectrum β-lactamase; MBL, metallo-β-lactamase.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only. ND, not determined; MIC range and % susceptible were not determined for n=0 isolates.

[e] Included isolates carrying CTX-M-2; CTX-M-3; CTX-M-8; CTX-M-9; CTX-M-14; CTX-M-15; CTX-M-24; CTX-M-59; CTX-M-2 and CTX-M-28; CTX-M-15 and CTX-M-2; CTX-M-15 and CTX-M-8; CTX-M-15 and SHV-136; CTX-M-15 and TEM-15; CTX-M-15 and CTX-M-2 and SHV-12; SHV-12; and the chromosomal ESBL common to *K. oxytoca*, with or without a SHV-OSBL and/or TEM-OSBL.

[f] Included isolates carrying CMY-2 and/or the chromosomal AmpCs common to *Citrobacter* spp., *Enterobacter* spp., and *Serratia* spp. with or without a TEM-OSBL.

[g] Included isolates carrying CTX-M-15 and CMY-2; CTX-M-15 and DHA-1; and the chromosomal AmpCs common to *Citrobacter* spp. and *Enterobacter* spp. with CTX-M-2, CTX-M-15, or CTX-M-9 and SHV-12; with or without a SHV-OSBL or TEM-OSBL.

[h] Included isolates carrying KPC-2; KPC-3; KPC-2 and CTX-M-2; KPC-2 and CTX-M-8; KPC-2 and CTX-M-9; KPC-2 and CTX-M-14; KPC-2 and CTX-M-15; KPC-2 and CTX-M-67; KPC-2 and SHV-12; KPC-2 and SHV-52; KPC-2 and CTX-M-2 and CTX-M-15; KPC-2 and CTX-M-14 and OXA-370; with and without a SHV-OSBL and/or TEM-OSBL and the chromosomal β–lactamases common to *Enterobacter* spp. and *K. oxytoca*.

[i] Isolates carrying OXA-48, CTX-M-15 and a TEM-OSBL; and OXA-370, CTX-M-15; a SHV-OSBL and a TEM-OSBL.

[j] Assumed to carry the chromosomal AmpC common to *P. aeruginosa*.

[k] Isolate carrying PER-1.

[l] Isolates carrying IMP-49, VIM-2, or SPM-1.

Table S4A. Chile - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 1,518 isolates of *Enterobacteriaceae* and *P. aeruginosa* collected as part of the INFORM global surveillance program in 2012-2015.

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae					
All (1,236)[d]	Ceftazidime-avibactam	0.12	1	≤0.015–8	100
	Ceftazidime	0.25	128	≤0.015–>128	66.6
	Cefepime	≤0.12	>16	≤0.12–>16	65.2
	Aztreonam	0.12	>128	≤0.015–>128	62.4
	Piperacillin-tazobactam	2	>128	≤0.25–>128	78.0
	Doripenem	0.06	0.5	≤0.008–>4	96.4
	Imipenem	0.25	2	≤0.03–8	86.1
	Meropenem	0.06	0.25	≤0.004–8	94.0
	Amikacin	2	16	≤0.25–>32	92.1
	Colistin (n=685)[e]	1	>4	≤0.12–>4	80.2
	Tigecycline	0.5	2	≤0.015–>8	92.7
	Levofloxacin	0.25	>4	≤0.03–>4	64.4
Ceftazidime non-susceptible (413)[d]	Ceftazidime-avibactam	0.5	2	≤0.015–8	100
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	17.7
	Aztreonam	128	>128	0.06–>128	4.1
	Piperacillin-tazobactam	32	>128	≤0.25–>128	41.9
	Doripenem	0.12	2	≤0.008–>4	89.8
	Imipenem	0.25	1	0.06–8	92.5
	Meropenem	0.06	2	0.015–8	82.6
	Amikacin	4	>32	0.5–>32	84.3
	Colistin (n=238)[e]	1	>4	0.25–>4	84.9
	Tigecycline	0.5	2	0.06–8	95.6
	Levofloxacin	>4	>4	≤0.03–>4	33.7
Meropenem non-susceptible (74)[d]	Ceftazidime-avibactam	2	4	0.5–8	100
	Ceftazidime	128	>128	0.5–>128	2.7
	Cefepime	>16	>16	1–>16	1.4
	Aztreonam	>128	>128	2–>128	2.7
	Piperacillin-tazobactam	>128	>128	128–>128	0
	Doripenem	2	4	0.5–>4	43.2
	Imipenem	0.5	1	0.25–8	90.5
	Meropenem	2	4	2–8	0
	Amikacin	8	>32	1–>32	63.5
	Colistin (n=47)[e]	1	>4	0.25–>4	63.8
	Tigecycline	1	2	0.06–4	96.0
	Levofloxacin	>4	>4	0.12–>4	1.4
Colistin-resistant (28) [d,f]	Ceftazidime-avibactam	2	4	0.06–4	100
	Ceftazidime	64	128	0.12–>128	35.7
	Cefepime	>16	>16	≤0.12–>16	32.1
	Aztreonam	128	>128	0.06–>128	35.7
	Piperacillin-tazobactam	>128	>128	2–>128	35.7
	Doripenem	1	4	0.06–4	53.6
	Imipenem	0.5	1	0.12–1	100
	Meropenem	2	4	0.03–8	39.3
	Amikacin	>32	>32	1–>32	32.1
	Colistin (n=28)[e]	>4	>4	4–>4	0
	Tigecycline	1	2	0.5–4	92.9
	Levofloxacin	>4	>4	0.06–>4	14.3
Multidrug-resistant (299)[d]	Ceftazidime-avibactam	1	4	≤0.015–8	100
	Ceftazidime	64	>128	0.12–>128	12.4
	Cefepime	>16	>16	≤0.12–>16	3.7

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Aztreonam	128	>128	0.12–>128	5.4
	Piperacillin-tazobactam	128	>128	≤0.25–>128	32.4
	Doripenem	0.12	2	0.03–>4	85.6
	Imipenem	0.5	2	0.06–8	88.6
	Meropenem	0.12	2	0.015–8	75.6
	Amikacin	8	>32	0.5–>32	74.3
	Colistin (n=171)[e]	1	>4	0.25–>4	74.9
	Tigecycline	1	4	0.06–>8	89.6
	Levofloxacin	>4	>4	≤0.03–>4	6.7
Escherichia coli[g,h]					
All (432)[d]	Ceftazidime-avibactam	0.12	0.25	≤0.015–1	100
	Ceftazidime	0.25	32	≤0.015–>128	81.3
	Cefepime	≤0.12	>16	≤0.12–>16	75.5
	Aztreonam	0.12	64	≤0.015–>128	75.7
	Piperacillin-tazobactam	2	16	≤0.25–>128	92.8
	Doripenem	0.03	0.06	≤0.008–0.25	100
	Imipenem	0.25	0.25	≤0.03–1	100
	Meropenem	0.03	0.06	≤0.004–0.5	100
	Amikacin	4	8	0.5–>32	95.8
	Colistin (n=214)[e]	0.5	1	≤0.12–2	100
	Tigecycline	0.25	0.5	≤0.015–2	100
	Levofloxacin	0.06	>4	≤0.03–>4	66.0
Ceftazidime non-susceptible (81)[d]	Ceftazidime-avibactam	0.25	0.5	≤0.015–1	100
	Ceftazidime	32	128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	2.5
	Aztreonam	64	128	8–>128	0
	Piperacillin-tazobactam	16	64	1–>128	74.1
	Doripenem	0.03	0.06	≤0.008–0.12	100
	Imipenem	0.25	0.5	0.06–1	100
	Meropenem	0.03	0.06	0.015–0.12	100
	Amikacin	8	32	1–>32	84.0
	Colistin (n=36)[e]	0.5	1	0.25–1	100
	Tigecycline	0.25	0.5	0.06–1	100
	Levofloxacin	>4	>4	≤0.03–>4	9.9
Multidrug-resistant (69)[d]	Ceftazidime-avibactam	0.25	0.5	≤0.015–1	100
	Ceftazidime	64	128	0.12–>128	5.8
	Cefepime	>16	>16	8–>16	0
	Aztreonam	64	128	0.12–>128	1.5
	Piperacillin-tazobactam	16	64	1–>128	69.6
	Doripenem	0.03	0.06	0.03–0.12	100
	Imipenem	0.25	0.5	0.06–1	100
	Meropenem	0.03	0.06	0.015–0.12	100
	Amikacin	8	>32	2–>32	81.2
	Colistin (n=29)[e]	0.5	1	0.25–1	100
	Tigecycline	0.25	0.5	0.06–1	100
	Levofloxacin	>4	>4	≤0.03–>4	4.4
Klebsiella pneumoniae					
All (341)[d]	Ceftazidime-avibactam	0.5	2	≤0.015–8	100
	Ceftazidime	64	>128	0.03–>128	35.8
	Cefepime	>16	>16	≤0.12–>16	37.0
	Aztreonam	64	>128	≤0.015–>128	34.6
	Piperacillin-tazobactam	16	>128	≤0.25–>128	50.4
	Doripenem	0.06	2	0.03–>4	87.7
	Imipenem	0.25	1	0.06–8	97.4
	Meropenem	0.06	2	0.015–8	78.6
	Amikacin	2	>32	≤0.25–>32	85.6
	Colistin (n=215)[e]	1	>4	0.25–>4	87.4
	Tigecycline	0.5	2	0.06–8	96.5
	Levofloxacin	>4	>4	≤0.03–>4	44.3

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Ceftazidime non-susceptible (219)[d]	Ceftazidime-avibactam	1	4	0.03–8	100
	Ceftazidime	128	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	5.5
	Aztreonam	128	>128	1–>128	0.9
	Piperacillin-tazobactam	>128	>128	1–>128	27.4
	Doripenem	0.12	2	0.03–>4	81.3
	Imipenem	0.25	1	0.06–8	96.8
	Meropenem	0.12	2	0.015–8	67.6
	Amikacin	4	>32	0.5–>32	83.1
	Colistin (n=139)[e]	1	>4	0.25–>4	87.1
	Tigecycline	1	2	0.06–8	96.4
	Levofloxacin	>4	>4	≤0.03–>4	26.9
Meropenem non-susceptible (73)[d]	Ceftazidime-avibactam	2	4	0.5–8	100
	Ceftazidime	128	>128	0.5–>128	2.7
	Cefepime	>16	>16	1–>16	1.4
	Aztreonam	>128	>128	2–>128	2.7
	Piperacillin-tazobactam	>128	>128	128–>128	0
	Doripenem	2	4	0.5–>4	43.8
	Imipenem	0.5	1	0.25–8	91.8
	Meropenem	2	4	2–8	0
	Amikacin	8	>32	1–>32	63.0
	Colistin (n=47)[e]	1	>4	0.25–>4	63.8
	Tigecycline	1	2	0.06–4	95.9
	Levofloxacin	>4	>4	0.12–>4	1.4
Colistin-resistant (27)[d]	Ceftazidime-avibactam	2	4	0.06–4	100
	Ceftazidime	64	128	0.12–>128	33.3
	Cefepime	>16	>16	≤0.12–>16	29.6
	Aztreonam	128	>128	0.06–>128	33.3
	Piperacillin-tazobactam	>128	>128	2–>128	33.3
	Doripenem	1	4	0.06–4	51.9
	Imipenem	0.5	1	0.12–1	100
	Meropenem	2	4	0.03–8	37.0
	Amikacin	>32	>32	1–>32	29.6
	Colistin (n=27)[e]	>4	>4	4–>4	0
	Tigecycline	1	2	0.5–4	92.6
	Levofloxacin	>4	>4	0.06–>4	11.1
Multidrug-resistant (166)[d]	Ceftazidime-avibactam	1	4	0.06–8	100
	Ceftazidime	128	>128	0.5–>128	3.6
	Cefepime	>16	>16	≤0.12–>16	4.8
	Aztreonam	>128	>128	0.25–>128	3.6
	Piperacillin-tazobactam	>128	>128	2–>128	9.6
	Doripenem	0.5	2	0.03–>4	74.7
	Imipenem	0.25	1	0.12–8	95.8
	Meropenem	1	4	0.015–8	56.6
	Amikacin	4	>32	0.5–>32	74.7
	Colistin (n=105)[e]	1	>4	0.25–>4	78.1
	Tigecycline	1	2	0.06–8	95.2
	Levofloxacin	>4	>4	0.06–>4	4.8
Klebsiella oxytoca[g]					
All (68)[d]	Ceftazidime-avibactam	0.12	0.5	≤0.015–1	100
	Ceftazidime	0.12	8	0.03–>128	89.7
	Cefepime	≤0.12	4	≤0.12–>16	85.3
	Aztreonam	0.12	64	≤0.015–>128	76.5
	Piperacillin-tazobactam	2	>128	0.5–>128	83.8
	Doripenem	0.06	0.12	0.03–0.25	100
	Imipenem	0.25	0.5	0.12–2	98.5
	Meropenem	0.03	0.06	0.03–0.25	100
	Amikacin	1	4	0.5–>32	97.1
	Colistin (n=41)[e]	0.5	1	0.25–4	97.6
	Tigecycline	0.25	1	0.06–2	100

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Levofloxacin	0.06	1	≤0.03–>4	95.6
Ceftazidime non-susceptible (7)[d]	Ceftazidime-avibactam	—[b]	—	0.03–1	100
	Ceftazidime	—	—	8–>128	0
	Cefepime	—	—	0.5–>16	42.9
	Aztreonam	—	—	64–>128	0
	Piperacillin-tazobactam	—	—	2–>128	28.6
	Doripenem	—	—	0.06–0.25	100
	Imipenem	—	—	0.25–2	85.7
	Meropenem	—	—	0.03–0.25	100
	Amikacin	—	—	2–>32	85.7
	Colistin (n=5)[e]	—	—	0.25–1	100
	Tigecycline	—	—	0.25–2	100
	Levofloxacin	—	—	0.12–>4	85.7
Colistin-resistant (1)[d]	Ceftazidime-avibactam	—[b]	—	0.12	100
	Ceftazidime	—	—	0.25	100
	Cefepime	—	—	0.25	100
	Aztreonam	—	—	0.12	100
	Piperacillin-tazobactam	—	—	4	100
	Doripenem	—	—	0.06	100
	Imipenem	—	—	0.25	100
	Meropenem	—	—	0.03	100
	Amikacin	—	—	2	100
	Colistin (n=1)[e]	—	—	4	0
	Tigecycline	—	—	0.5	100
	Levofloxacin	—	—	2	100
Multidrug-resistant (3)[d]	Ceftazidime-avibactam	—[b]	—	0.5–1	100
	Ceftazidime	—	—	32–>128	0
	Cefepime	—	—	4–>16	0
	Aztreonam	—	—	64–>128	0
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	0.06–0.12	100
	Imipenem	—	—	0.25–1	100
	Meropenem	—	—	0.06–0.12	100
	Amikacin	—	—	8–>32	66.7
	Colistin (n=1)[e]	—	—	0.25	100
	Tigecycline	—	—	1–2	100
	Levofloxacin	—	—	0.12–>4	66.7
Enterobacter spp.[h]					
All (126)[d,i]	Ceftazidime-avibactam	0.25	1	≤0.015–4	100
	Ceftazidime	1	>128	0.03–>128	57.9
	Cefepime	0.25	>16	≤0.12–>16	73.8
	Aztreonam	0.5	128	≤0.015–>128	55.6
	Piperacillin-tazobactam	4	>128	≤0.25–>128	67.5
	Doripenem	0.06	0.25	0.015–4	99.2
	Imipenem	0.5	2	0.12–8	84.9
	Meropenem	0.06	0.25	0.015–4	99.2
	Amikacin	1	16	0.5–>32	95.2
	Colistin (n=66)[e]	0.5	1	0.25–2	100
	Tigecycline	0.5	2	0.12–8	96.8
	Levofloxacin	0.06	>4	≤0.03–>4	81.0
Ceftazidime non-susceptible (53)[d]	Ceftazidime-avibactam	0.5	2	0.12–4	100
	Ceftazidime	128	>128	8–>128	0
	Cefepime	2	>16	≤0.12–>16	50.9
	Aztreonam	64	>128	0.06–>128	5.7
	Piperacillin-tazobactam	64	>128	2–>128	28.3
	Doripenem	0.12	0.5	0.015–4	98.1
	Imipenem	0.5	1	0.12–8	90.6
	Meropenem	0.12	0.5	0.03–4	98.1
	Amikacin	2	16	0.5–>32	90.6

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Colistin (n=27)[e]	0.5	1	0.25–1	100
	Tigecycline	1	2	0.12–8	94.3
	Levofloxacin	1	>4	0.06–>4	60.4
Meropenem non-susceptible (1)[d]	Ceftazidime-avibactam	—[b]	—	1	100
	Ceftazidime	—	—	128	0
	Cefepime	—	—	8	0
	Aztreonam	—	—	32	0
	Piperacillin-tazobactam	—	—	128	0
	Doripenem	—	—	4	0
	Imipenem	—	—	8	0
	Meropenem	—	—	4	0
	Amikacin	—	—	4	100
	Colistin (n=0)[e]	—	—	ND[e]	ND
	Tigecycline	—	—	2	100
	Levofloxacin	—	—	>4	0
Multidrug-resistant (20)[d]	Ceftazidime-avibactam	1	2	0.12–4	100
	Ceftazidime	128	>128	2–>128	10.0
	Cefepime	>16	>16	1–>16	5.0
	Aztreonam	128	>128	32–>128	0
	Piperacillin-tazobactam	>128	>128	4–>128	15.0
	Doripenem	0.12	0.5	0.06–4	95.0
	Imipenem	0.5	1	0.25–8	90.0
	Meropenem	0.12	0.5	0.06–4	95.0
	Amikacin	4	32	1–>32	75.0
	Colistin (n=12)[e]	0.5	1	0.25–1	100
	Tigecycline	1	2	0.5–8	90.0
	Levofloxacin	>4	>4	1–>4	5.0
Citrobacter spp.[g,h]					
All (68)[d,j]	Ceftazidime-avibactam	0.12	0.5	≤0.015–4	100
	Ceftazidime	0.5	128	0.12–>128	64.7
	Cefepime	0.25	>16	≤0.12–>16	77.9
	Aztreonam	0.25	64	0.06–>128	58.8
	Piperacillin-tazobactam	4	128	1–>128	80.9
	Doripenem	0.06	0.12	0.015–0.12	100
	Imipenem	0.5	1	0.12–2	92.7
	Meropenem	0.03	0.06	0.015–0.12	100
	Amikacin	2	8	1–>32	94.1
	Colistin (n=38)[e]	0.5	1	0.25–2	100
	Tigecycline	0.5	1	0.12–4	98.5
	Levofloxacin	0.06	>4	≤0.03–>4	80.9
Ceftazidime non-susceptible (24)[d]	Ceftazidime-avibactam	0.25	0.5	0.03–4	100
	Ceftazidime	64	128	8–>128	0
	Cefepime	2	>16	≤0.12–>16	54.2
	Aztreonam	32	128	2–>128	4.2
	Piperacillin-tazobactam	16	128	2–>128	54.2
	Doripenem	0.06	0.12	0.03–0.12	100
	Imipenem	0.5	1	0.12–2	91.7
	Meropenem	0.06	0.06	0.015–0.12	100
	Amikacin	2	32	1–>32	83.3
	Colistin (n=11)[e]	1	1	0.25–1	100
	Tigecycline	0.5	2	0.25–4	95.8
	Levofloxacin	0.25	>4	≤0.03–>4	62.5
Multidrug-resistant (8)[d]	Ceftazidime-avibactam	—[b]	—	0.03–4	100
	Ceftazidime	—	—	4–>128	25.0
	Cefepime	—	—	16–>16	0
	Aztreonam	—	—	16–>128	0
	Piperacillin-tazobactam	—	—	8–>128	50.0
	Doripenem	—	—	0.03–0.12	100
	Imipenem	—	—	0.5–2	75.0

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Meropenem	—	—	0.03–0.12	100
	Amikacin	—	—	2–>32	50.0
	Colistin (n=3)[e]	—	—	1–1	100
	Tigecycline	—	—	0.5–2	100
	Levofloxacin	—	—	4–>4	0.0
Proteeae[g]					
All (162)[d,k]	Ceftazidime-avibactam	0.06	0.12	≤0.015–1	100
	Ceftazidime	0.12	4	≤0.015–64	90.1
	Cefepime	≤0.12	>16	≤0.12–>16	74.1
	Aztreonam	0.06	8	≤0.015–>128	85.2
	Piperacillin-tazobactam	0.5	2	≤0.25–64	99.4
	Doripenem	0.25	0.5	0.015–2	98.8
	Imipenem	2	4	0.12–8	17.3
	Meropenem	0.12	0.12	0.03–1	100
	Amikacin	4	16	≤0.25–>32	90.7
	Colistin (n=91)[e]	>4	>4	>4–>4	0
	Tigecycline	2	4	0.5–>8	56.8
	Levofloxacin	0.12	>4	≤0.03–>4	63.6
Ceftazidime-non-susceptible (16)[d]	Ceftazidime-avibactam	0.06	0.25	0.03–0.5	100
	Ceftazidime	16	64	8–64	0
	Cefepime	≤0.12	>16	≤0.12–>16	75.0
	Aztreonam	2	16	0.5–>128	68.8
	Piperacillin-tazobactam	0.5	16	≤0.25–16	100
	Doripenem	0.25	0.5	0.25–0.5	100
	Imipenem	4	4	2–4	0
	Meropenem	0.12	0.12	0.06–0.25	100
	Amikacin	2	32	1–32	87.5
	Colistin (n=12)[e]	>4	>4	>4–>4	0
	Tigecycline	2	4	1–4	75.0
	Levofloxacin	1	>4	0.06–>4	56.3
Multidrug-resistant (25)[d]	Ceftazidime-avibactam	0.06	0.12	≤0.015–0.25	100
	Ceftazidime	1	4	0.25–8	92.0
	Cefepime	>16	>16	2–>16	4.0
	Aztreonam	16	64	0.25–>128	36.0
	Piperacillin-tazobactam	1	2	≤0.25–64	96.0
	Doripenem	0.5	0.5	0.12–1	100
	Imipenem	4	4	0.25–8	8.0
	Meropenem	0.12	0.25	0.06–0.5	100
	Amikacin	16	>32	2–>32	64.0
	Colistin (n=15)[e]	>4	>4	>4–>4	0
	Tigecycline	4	8	0.5–>8	24.0
	Levofloxacin	>4	>4	0.12–>4	4.0
Other *Enterobacteriaceae*[g,h]					
All (39)[d,l]	Ceftazidime-avibactam	0.25	1	0.06–4	100
	Ceftazidime	0.25	64	0.12–>128	66.7
	Cefepime	0.25	>16	≤0.12–>16	76.9
	Aztreonam	0.25	128	0.06–>128	66.7
	Piperacillin-tazobactam	2	128	0.5–>128	84.6
	Doripenem	0.12	0.25	0.06–0.5	100
	Imipenem	0.5	2	0.25–4	89.7
	Meropenem	0.06	0.25	0.03–0.5	100
	Amikacin	2	32	0.5–>32	89.7
	Colistin (n=20)[e]	>4	>4	1–>4	15.0
	Tigecycline	2	2	0.5–8	92.3
	Levofloxacin	0.25	4	≤0.03–>4	89.7
Ceftazidime-non-susceptible (13)[d]	Ceftazidime-avibactam	0.5	1	0.25–4	100
	Ceftazidime	16	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	30.8
	Aztreonam	128	>128	32–>128	0

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Piperacillin-tazobactam	16	>128	0.5–>128	53.9
	Doripenem	0.25	0.5	0.06–0.5	100
	Imipenem	1	1	0.25–1	100
	Meropenem	0.12	0.5	0.06–0.5	100
	Amikacin	8	32	2–>32	76.9
	Colistin (n=8)[e]	—[b]	—	1–>4	25.0
	Tigecycline	2	4	1–8	84.6
	Levofloxacin	1	>4	0.25–>4	76.9
Multidrug-resistant (8)[d]	Ceftazidime-avibactam	—[b]	—	0.25–4	100
	Ceftazidime	—	—	8–>128	0
	Cefepime	—	—	0.5–>16	12.5
	Aztreonam	—	—	64–>128	0
	Piperacillin-tazobactam	—	—	0.5–>128	25.0
	Doripenem	—	—	0.06–0.5	100
	Imipenem	—	—	0.25–1	100
	Meropenem	—	—	0.06–0.5	100
	Amikacin	—	—	4–>32	62.5
	Colistin (n=6)[e]	—	—	2–>4	16.7
	Tigecycline	—	—	1–8	75.0
	Levofloxacin	—	—	0.5–>4	62.5
Pseudomonas aeruginosa[h]					
All (282)	Ceftazidime-avibactam	4	32	0.25–>128	79.1
	Ceftazidime	8	128	0.5–>128	51.1
	Cefepime	8	>16	0.25–>16	57.5
	Aztreonam	16	>128	0.25–>128	42.6
	Piperacillin-tazobactam	32	>128	≤0.25–>128	48.6
	Doripenem	2	>4	0.12–>4	55.3
	Imipenem	8	>8	0.25–>8	42.9
	Meropenem	2	>8	≤0.06–>8	53.2
	Amikacin	4	>32	≤0.25–>32	79.8
	Colistin (n=203)[e]	2	2	0.5–4	95.1
	Levofloxacin	2	>4	≤0.03–>4	54.3
All, MBL-negative (249)	Ceftazidime-avibactam	2	16	0.25–>128	89.2
	Ceftazidime	4	128	0.5–>128	57.4
	Cefepime	8	>16	0.25–>16	62.7
	Aztreonam	16	>128	0.25–>128	45.8
	Piperacillin-tazobactam	16	>128	≤0.25–>128	54.6
	Doripenem	1	>4	0.12–>4	61.5
	Imipenem	4	>8	0.25–>8	48.6
	Meropenem	1	>8	≤0.06–>8	59.0
	Amikacin	4	32	≤0.25–>32	88.0
	Colistin (n=173)[e]	2	2	0.5–4	96.0
	Levofloxacin	1	>4	≤0.03–>4	59.0
Ceftazidime-non-susceptible (138)	Ceftazidime-avibactam	8	64	0.5–>128	57.3
	Ceftazidime	64	>128	16–>128	0
	Cefepime	16	>16	4–>16	16.7
	Aztreonam	32	>128	4–>128	4.4
	Piperacillin-tazobactam	128	>128	8–>128	7.3
	Doripenem	>4	>4	0.25–>4	26.1
	Imipenem	>8	>8	1–>8	17.4
	Meropenem	>8	>8	0.12–>8	24.6
	Amikacin	8	>32	0.5–>32	62.3
	Colistin (n=110)[e]	2	2	0.5–4	93.6
	Levofloxacin	>4	>4	0.25–>4	25.4
Ceftazidime-non-susceptible, MBL-negative (106)	Ceftazidime-avibactam	8	32	0.5–>128	74.5
	Ceftazidime	64	>128	16–>128	0
	Cefepime	>16	>16	4–>16	17.0
	Aztreonam	128	>128	8–>128	0.9
	Piperacillin-tazobactam	128	>128	8–>128	9.4

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Doripenem	>4	>4	0.25–>4	31.1
	Imipenem	>8	>8	1–>8	22.6
	Meropenem	8	>8	0.12–>8	29.3
	Amikacin	8	>32	0.5–>32	76.4
	Colistin (n=81)[e]	2	2	0.5–4	95.1
	Levofloxacin	>4	>4	0.25–>4	27.4
Meropenem non-susceptible (132)	Ceftazidime-avibactam	8	64	0.5–>128	59.9
	Ceftazidime	32	>128	2–>128	21.2
	Cefepime	>16	>16	2–>16	26.5
	Aztreonam	32	>128	2–>128	12.9
	Piperacillin-tazobactam	64	>128	2–>128	18.9
	Doripenem	>4	>4	1–>4	6.1
	Imipenem	>8	>8	2–>8	0.8
	Meropenem	>8	>8	4–>8	0
	Amikacin	16	>32	1–>32	63.6
	Colistin (n=104)[e]	2	2	0.5–4	93.3
	Levofloxacin	>4	>4	0.25–>4	24.2
Meropenem non-susceptible, MBL-negative (102)	Ceftazidime-avibactam	8	32	0.5–>128	76.5
	Ceftazidime	64	>128	2–>128	26.5
	Cefepime	>16	>16	2–>16	29.4
	Aztreonam	64	>128	2–>128	10.8
	Piperacillin-tazobactam	128	>128	2–>128	23.5
	Doripenem	>4	>4	1–>4	7.8
	Imipenem	>8	>8	2–>8	1.0
	Meropenem	>8	>8	4–>8	0
	Amikacin	8	>32	1–>32	76.5
	Colistin (n=75)[e]	2	2	0.5–4	94.7
	Levofloxacin	>4	>4	0.25–>4	25.5
Multidrug-resistant (96)	Ceftazidime-avibactam	8	64	0.5–>128	57.3
	Ceftazidime	64	>128	4–>128	8.3
	Cefepime	>16	>16	8–>16	5.2
	Aztreonam	128	>128	8–>128	2.1
	Piperacillin-tazobactam	>128	>128	2–>128	7.3
	Doripenem	>4	>4	0.12–>4	7.3
	Imipenem	>8	>8	1–>8	7.3
	Meropenem	>8	>8	0.12–>8	7.3
	Amikacin	16	>32	1–>32	58.3
	Colistin (n=79)[e]	2	2	0.5–4	92.4
	Levofloxacin	>4	>4	0.25–>4	8.3
Multidrug-resistant, MBL-negative (76)	Ceftazidime-avibactam	8	64	0.5–>128	72.4
	Ceftazidime	64	>128	4–>128	10.5
	Cefepime	>16	>16	8–>16	6.6
	Aztreonam	128	>128	16–>128	0
	Piperacillin-tazobactam	>128	>128	2–>128	9.2
	Doripenem	>4	>4	0.12–>4	9.2
	Imipenem	>8	>8	1–>8	9.2
	Meropenem	>8	>8	0.12–>8	9.2
	Amikacin	8	>32	1–>32	71.1
	Colistin (n=59)[e]	2	2	0.5–4	93.2
	Levofloxacin	>4	>4	0.25–>4	5.3

[a] MBL-negative, no gene encoding a metallo-β-lactamase was detected by polymerase chain reaction assay.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] All isolates were MBL-negative.

[e] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only. ND, not determined; MIC range and % susceptible were not determined for n=0 isolates.

[f] Excluded isolates of Proteeae and *Serratia* spp., which are intrinsically resistant to colistin.

[g] No meropenem non-susceptible isolates were collected.

[h] No colistin-resistant isolates were collected.

[i] *Enterobacter* spp. included *Enterobacter aerogenes* (n=30), *Enterobacter amnigenus* (n=1), *Enterobacter asburiae* (n=1), *Enterobacter cloacae* (n=87), *Enterobacter kobei* (n=4), and *Enterobacter ludwigii* (n=3).

[j] *Citrobacter* spp. included *Citrobacter amalonaticus* (n=2), *Citrobacter braakii* (n=9), *Citrobacter freundii* (n=51), and *Citrobacter koseri* (n=6).

[k] Proteeae included *Morganella morganii* (n=40), *Proteus mirabilis* (n=87), *Proteus penneri* (n=3), *Proteus vulgaris* (n=26), *Providencia rettgeri* (n=1), and *Providencia stuartii* (n=5).

[l] Other *Enterobacteriaceae* included *Kluyvera ascorbata* (n=1), *Serratia liquefaciens* (n=2), and *Serratia marcescens* (n=36).

Table S4B. Chile - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 559 isolates of β-lactamase-positive *Enterobacteriaceae* (n=403) and *P. aeruginosa* (n=156) collected as part of the INFORM global surveillance program in 2012–2015.

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae (403)					
OSBL-positive (10)	Ceftazidime-avibactam	0.25	1	0.03–1	100
	Ceftazidime	1	32	≤0.015–64	60.0
	Cefepime	0.25	16	≤0.12–16	80.0
	Aztreonam	1	64	≤0.015–128	70.0
	Piperacillin-tazobactam	16	>128	≤0.25–>128	80.0
	Doripenem	0.06	0.5	0.03–2	90.0
	Imipenem	0.25	8	0.06–8	70.0
	Meropenem	0.06	0.12	0.03–0.5	100
	Amikacin	2	16	≤0.25–>32	90.0
	Colistin (n=2)[d]	—[b]	—	0.5->4	50.0
	Tigecycline	0.5	2	0.5–4	90.0
	Levofloxacin	>4	>4	0.06–>4	40.0
Spectrum undefined-positive (1)[e]	Ceftazidime-avibactam	—[b]	—	0.12	100
	Ceftazidime	—	—	32	0
	Cefepime	—	—	≤0.12	100
	Aztreonam	—	—	4	100
	Piperacillin-tazobactam	—	—	64	0
	Doripenem	—	—	0.06	100
	Imipenem	—	—	0.25	100
	Meropenem	—	—	0.06	100
	Amikacin	—	—	1	100
	Colistin (n=0)[d]	—	—	ND[d]	ND
	Tigecycline	—	—	2	100
	Levofloxacin	—	—	0.5	100
ESBL-positive (360)[f]	Ceftazidime-avibactam	0.5	2	≤0.015–8	100
	Ceftazidime	64	>128	0.25–>128	18.3
	Cefepime	>16	>16	0.5–>16	5.6
	Aztreonam	128	>128	0.25–>128	5.6
	Piperacillin-tazobactam	32	>128	≤0.25–>128	48.6
	Doripenem	0.06	2	≤0.008–>4	88.6
	Imipenem	0.25	1	0.06–8	92.8
	Meropenem	0.06	2	≤0.004–8	80.0
	Amikacin	4	>32	0.5–>32	82.2
	Colistin (n=213)[d]	1	>4	0.25–>4	85.4
	Tigecycline	0.5	2	0.06–>8	92.8
	Levofloxacin	>4	>4	≤0.03–>4	28.9
AmpC-positive (16)[g]	Ceftazidime-avibactam	0.25	1	0.03–1	100
	Ceftazidime	1	>128	0.25–>128	50.0
	Cefepime	0.5	8	≤0.12–8	75.0
	Aztreonam	2	128	0.06–128	50.0
	Piperacillin-tazobactam	8	>128	0.5–>128	56.3
	Doripenem	0.12	1	0.03–4	93.8
	Imipenem	2	4	0.25–8	37.5
	Meropenem	0.12	0.5	0.03–4	93.8
	Amikacin	2	8	1–>32	93.8
	Colistin (n=8)[d]	—[b]	—	0.25–>4	87.5
	Tigecycline	0.5	2	0.12–2	100
	Levofloxacin	0.06	>4	≤0.03–>4	87.5
ESBL-positive + AmpC-positive (15)[h]	Ceftazidime-avibactam	0.5	2	0.03–2	100
	Ceftazidime	64	>128	2–>128	6.7
	Cefepime	16	>16	≤0.12–>16	20.0
	Aztreonam	128	>128	8–>128	0

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Piperacillin-tazobactam	32	>128	2–>128	46.7
	Doripenem	0.12	0.5	0.03–0.5	100
	Imipenem	1	2	0.25–2	73.3
	Meropenem	0.12	0.5	0.03–0.5	100
	Amikacin	8	32	1–>32	80.0
	Colistin (n=5)[d]	—[b]	—	0.25–1	100
	Tigecycline	1	2	0.12–4	93.3
	Levofloxacin	>4	>4	0.06–>4	26.7
KPC-positive (1)[i]	Ceftazidime-avibactam	—[b]	—	1	100
	Ceftazidime	—	—	128	0
	Cefepime	—	—	>16	0
	Aztreonam	—	—	>128	0
	Piperacillin-tazobactam	—	—	>128	0
	Doripenem	—	—	4	0
	Imipenem	—	—	8	0
	Meropenem	—	—	8	0
	Amikacin	—	—	32	0
	Colistin (n=0)[d]	—	—	ND[d]	ND
	Tigecycline	—	—	2	100
	Levofloxacin	—	—	>4	0
P. aeruginosa (156)					
OSBL-positive (3)[j]	Ceftazidime-avibactam	—[b]	—	4–16	66.7
	Ceftazidime	—	—	8–64	33.3
	Cefepime	—	—	16–>16	0
	Aztreonam	—	—	16–64	0
	Piperacillin-tazobactam	—	—	64–>128	0
	Doripenem	—	—	1–>4	66.7
	Imipenem	—	—	2–>8	33.3
	Meropenem	—	—	2–>8	33.3
	Amikacin	—	—	>32–>32	0
	Colistin (n=1)[d]	—	—	1	100
	Levofloxacin	—	—	>4–>4	0
ESBL-positive (16)[j,k]	Ceftazidime-avibactam	16	128	4 ->128	18.8
	Ceftazidime	>128	>128	>128–>128	0
	Cefepime	>16	>16	16–>16	0
	Aztreonam	>128	>128	>128–>128	0
	Piperacillin-tazobactam	32	64	8–128	37.5
	Doripenem	4	>4	2–>4	18.8
	Imipenem	>8	>8	>8–>8	0
	Meropenem	4	>8	4–>8	0
	Amikacin	32	>32	16–>32	31.3
	Colistin (n=11)[d]	1	2	1–4	90.9
	Levofloxacin	4	>4	1–>4	31.3
KPC-positive (24)[j,l]	Ceftazidime-avibactam	8	16	1–16	87.5
	Ceftazidime	64	128	64–128	0
	Cefepime	>16	>16	>16–>16	0
	Aztreonam	>128	>128	>128–>128	0
	Piperacillin-tazobactam	>128	>128	>128–>128	0
	Doripenem	>4	>4	>4–>4	0
	Imipenem	>8	>8	>8–>8	0
	Meropenem	>8	>8	>8–>8	0
	Amikacin	8	16	1–32	95.8
	Colistin (n=15)[d]	2	4	1–4	86.7
	Levofloxacin	>4	>4	>4–>4	0
MBL-positive (33)[j,m]	Ceftazidime-avibactam	32	64	4–>128	3.0
	Ceftazidime	32	128	4–>128	3.0
	Cefepime	16	>16	8–>16	18.2
	Aztreonam	16	>128	2–>128	18.2

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Piperacillin-tazobactam	64	>128	16–>128	3.0
	Doripenem	>4	>4	1–>4	9.1
	Imipenem	>8	>8	>8–>8	0
	Meropenem	>8	>8	1–>8	9.1
	Amikacin	>32	>32	4–>32	18.2
	Colistin (n=30)[d]	2	2	1–4	90.0
	Levofloxacin	>4	>4	0.5–>4	18.2
No acquired β-lactamase detected (80)[j]	Ceftazidime-avibactam	4	8	0.5–>128	91.3
	Ceftazidime	8	64	1–>128	51.3
	Cefepime	8	>16	1–>16	57.5
	Aztreonam	32	128	2–>128	31.3
	Piperacillin-tazobactam	64	>128	2–>128	41.3
	Doripenem	4	>4	0.25–>4	27.5
	Imipenem	>8	>8	1–>8	1.3
	Meropenem	8	>8	0.5–>8	25.0
	Amikacin	8	32	1–>32	86.3
	Colistin (n=60)[d]	2	2	0.5–4	96.7
	Levofloxacin	4	>4	0.12–>4	47.5

[a] OSBL, original-spectrum β-lactamase (e.g. TEM-1, SHV-1, SHV-11); ESBL, extended-spectrum β-lactamase; MBL, metallo-β-lactamase.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only. ND, not determined; MIC range and % susceptible were not determined for n=0 isolates.

[e] Spectrum undefined, SHV-type and/or TEM-type β-lactamase with undefined spectrum of activity; isolate carrying SHV-36.

[f] Included isolates carrying CTX-M-1; CTX-M-2; CTX-M-3; CTX-M-14; CTX-M-15; CTX-M-29; CTX-M-30; CTX-M-32; CTX-M-55; CTX-M-104; CTX-M-116; CTX-M-136; CTX-M-165; CTX-M-3 and CTX-M-2; CTX-M-14 and CTX-M-2; CTX-M-15 and CTX-M-2; CTX-M-15 and CTX-M-13; CTX-M-15 and CTX-M-14; CTX-M-30 and CTX-M-2; CTX-M-30 and CTX-M-75; CTX-M-2 and SHV-2; CTX-M-2 and SHV-5; CTX-M-2 and SHV-12; CTX-M-2 and SHV-31; CTX-M-3 and SHV-5; CTX-M-3 and SHV-12; CTX-M-15 and SHV-12; CTX-M-15 and SHV-32; CTX-M-15 and SHV-55; CTX-M-15 and PER-1; CTX-M-15 and CTX-M-2 and SHV-12; SHV-5; SHV-12; SHV-55; and the chromosomal ESBL common to *K. oxytoca*, with or without a SHV-OSBL and/or TEM-OSBL.

[g] Included isolates carrying CMY-2, DHA-1, and/or the chromosomal AmpCs common to *Citrobacter* spp., *Enterobacter* spp., and *Serratia* spp.

[h] Included isolates carrying CTX-M-15 and CMY-2; SHV-12 and DHA-1; SHV-12 and DHA-6; and the chromosomal AmpCs common to *Citrobacter* spp. and *Enterobacter* spp. with CTX-M-1; CTX-M-3; SHV-5; SHV-12; CTX-M-30; CTX-M-3 and SHV-12 and DHA-1; CTX-M-30 and SHV-12 and DHA-1; with or without a TEM-OSBL.

[i] Isolate co-carrying KPC-2, a SHV-OSBL and a TEM-OSBL.

[j] Assumed to carry the chromosomal AmpC common to *P. aeruginosa*.

[k] Included isolates carrying PER-1 or PER-3.

[l] Isolates carrying KPC-2.

[m] Isolates carrying VIM-2, or VIM-2 and KPC-2.

Table S5A. Colombia - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 1,172 isolates of *Enterobacteriaceae* and *P. aeruginosa* collected as part of the INFORM global surveillance program in 2012-2015.

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae					
All (972)	Ceftazidime-avibactam	0.12	0.5	≤0.015–>128	99.6
	Ceftazidime	0.25	64	≤0.015–>128	72.4
	Cefepime	≤0.12	>16	≤0.12–>16	75.9
	Aztreonam	0.12	64	≤0.015–>128	70.7
	Piperacillin-tazobactam	4	>128	≤0.25–>128	79.8
	Doripenem	0.06	0.5	≤0.008–>4	92.9
	Imipenem	0.25	4	0.06–>8	79.4
	Meropenem	0.03	0.25	0.008–>8	91.9
	Amikacin	2	8	0.5–>32	95.8
	Colistin (n=541)[d]	0.5	>4	≤0.12–>4	84.1
	Tigecycline	0.5	2	≤0.015–8	94.4
	Levofloxacin	0.12	>4	≤0.03–>4	76.5
All, MBL-negative (968)	Ceftazidime-avibactam	0.12	0.5	≤0.015–8	100
	Ceftazidime	0.25	64	≤0.015–>128	72.7
	Cefepime	≤0.12	>16	≤0.12–>16	76.2
	Aztreonam	0.12	64	≤0.015–>128	70.9
	Piperacillin-tazobactam	4	>128	≤0.25–>128	80.2
	Doripenem	0.06	0.5	≤0.008–>4	93.3
	Imipenem	0.25	4	0.06–>8	79.8
	Meropenem	0.03	0.25	0.008–>8	92.3
	Amikacin	2	8	0.5–>32	95.8
	Colistin (n=537)[d]	0.5	>4	≤0.12–>4	84.2
	Tigecycline	0.5	2	≤0.015–8	94.6
	Levofloxacin	0.12	>4	≤0.03–>4	76.6
Ceftazidime non-susceptible (268)	Ceftazidime-avibactam	0.25	1	0.03–>128	98.5
	Ceftazidime	32	>128	8–>128	0
	Cefepime	16	>16	≤0.12–>16	22.8
	Aztreonam	64	>128	0.06–>128	8.2
	Piperacillin-tazobactam	32	>128	0.5–>128	48.1
	Doripenem	0.06	>4	0.015–>4	76.9
	Imipenem	0.25	>8	0.06–>8	70.5
	Meropenem	0.06	>8	0.015–>8	75.0
	Amikacin	4	32	0.5–>32	86.6
	Colistin (n=145)[d]	0.5	2	0.25–>4	91.7
	Tigecycline	0.5	2	≤0.015–8	94.8
	Levofloxacin	>4	>4	≤0.03–>4	45.9
Ceftazidime non-susceptible, MBL-negative (264)	Ceftazidime-avibactam	0.25	1	0.03–8	100
	Ceftazidime	32	>128	8–>128	0
	Cefepime	16	>16	≤0.12–>16	23.1
	Aztreonam	64	>128	0.25–>128	8.0
	Piperacillin-tazobactam	32	>128	0.5–>128	48.9
	Doripenem	0.06	>4	0.015–>4	78.0
	Imipenem	0.25	>8	0.06–>8	71.6
	Meropenem	0.06	>8	0.015–>8	76.1
	Amikacin	4	32	0.5–>32	86.4
	Colistin (n=141)[d]	0.5	2	0.25–>4	92.2
	Tigecycline	0.5	2	≤0.015–8	95.5
	Levofloxacin	>4	>4	≤0.03–>4	45.5
Meropenem non-susceptible (79)	Ceftazidime-avibactam	0.5	4	0.06–>128	94.9
	Ceftazidime	32	>128	1–>128	15.2
	Cefepime	16	>16	≤0.12–>16	17.7

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Aztreonam	128	>128	0.06–>128	1.3
	Piperacillin-tazobactam	>128	>128	32–>128	0
	Doripenem	>4	>4	0.5–>4	12.7
	Imipenem	8	>8	2–>8	0
	Meropenem	8	>8	2–>8	0
	Amikacin	4	32	0.5–>32	74.7
	Colistin (n=52)[d]	0.5	2	0.25–>4	90.4
	Tigecycline	1	2	0.25–4	94.9
	Levofloxacin	1	>4	≤0.03–>4	54.4
Meropenem non-susceptible, MBL-negative (75)	Ceftazidime-avibactam	0.5	2	0.06–4	100
	Ceftazidime	32	>128	1–>128	16.0
	Cefepime	16	>16	≤0.12–>16	18.7
	Aztreonam	128	>128	8–>128	0
	Piperacillin-tazobactam	>128	>128	32–>128	0
	Doripenem	>4	>4	0.5–>4	13.3
	Imipenem	8	>8	2–>8	0
	Meropenem	8	>8	2–>8	0
	Amikacin	4	32	0.5–>32	73.3
	Colistin (n=48)[d]	0.5	2	0.25–>4	91.7
	Tigecycline	0.5	2	0.25–4	97.3
	Levofloxacin	1	>4	≤0.03–>4	53.3
Colistin-resistant (13)[e,f]	Ceftazidime-avibactam	0.25	2	0.12–2	100
	Ceftazidime	32	128	0.12–>128	46.2
	Cefepime	0.5	>16	≤0.12–>16	53.9
	Aztreonam	8	>128	0.03–>128	46.2
	Piperacillin-tazobactam	8	>128	1–>128	53.9
	Doripenem	0.06	>4	0.03–>4	69.2
	Imipenem	1	>8	0.12–>8	53.9
	Meropenem	0.06	>8	0.03–>8	69.2
	Amikacin	4	32	1–>32	84.6
	Colistin (n=13)[d]	>4	>4	4–>4	0
	Tigecycline	1	2	0.12–4	92.3
	Levofloxacin	1	>4	0.06–>4	53.9
Multidrug-resistant (178)	Ceftazidime-avibactam	0.25	2	0.03–>128	97.8
	Ceftazidime	32	>128	0.12–>128	6.7
	Cefepime	>16	>16	0.5–>16	4.5
	Aztreonam	64	>128	0.06–>128	2.3
	Piperacillin-tazobactam	128	>128	1–>128	37.1
	Doripenem	0.12	>4	0.015–>4	65.2
	Imipenem	0.5	>8	0.06–>8	58.4
	Meropenem	0.06	>8	0.015–>8	61.8
	Amikacin	8	32	0.5–>32	80.3
	Colistin (n=101)[d]	0.5	2	0.25–>4	92.1
	Tigecycline	0.5	2	0.06–8	92.7
	Levofloxacin	>4	>4	≤0.03–>4	25.3
Multidrug-resistant, MBL-negative (174)	Ceftazidime-avibactam	0.25	2	0.03–4	100
	Ceftazidime	32	>128	0.12–>128	6.9
	Cefepime	>16	>16	0.5–>16	4.6
	Aztreonam	64	>128	0.5–>128	1.7
	Piperacillin-tazobactam	64	>128	1–>128	37.9
	Doripenem	0.12	>4	0.015–>4	66.7
	Imipenem	0.25	>8	0.06–>8	59.8
	Meropenem	0.06	>8	0.015–>8	63.2
	Amikacin	8	32	0.5–>32	79.9
	Colistin (n=97)[d]	0.5	2	0.25–>4	92.8
	Tigecycline	0.5	2	0.06–8	93.7
	Levofloxacin	>4	>4	≤0.03–>4	24.1
Escherichia coli					
All (347)[e]	Ceftazidime-avibactam	0.12	0.25	≤0.015–1	100

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Ceftazidime	0.25	32	≤0.015–>128	71.5
	Cefepime	≤0.12	>16	≤0.12–>16	74.1
	Aztreonam	0.12	64	≤0.015–>128	69.7
	Piperacillin-tazobactam	2	32	≤0.25–>128	89.3
	Doripenem	0.03	0.06	0.015–4	99.4
	Imipenem	0.12	0.25	0.06–4	97.4
	Meropenem	0.03	0.06	0.008–4	98.6
	Amikacin	4	8	1–>32	97.4
	Colistin (n=176)[d]	0.5	1	≤0.12–4	98.3
	Tigecycline	0.25	0.5	0.06–2	100
	Levofloxacin	0.5	>4	≤0.03–>4	59.4
Ceftazidime non-susceptible (99)[e]	Ceftazidime-avibactam	0.25	0.25	0.03–1	100
	Ceftazidime	32	64	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	21.2
	Aztreonam	64	128	4–>128	7.1
	Piperacillin-tazobactam	8	64	2–>128	77.8
	Doripenem	0.06	0.12	0.015–4	98.0
	Imipenem	0.25	0.5	0.06–4	92.9
	Meropenem	0.03	0.06	0.015–4	95.0
	Amikacin	8	16	2–>32	91.9
	Colistin (n=44)[d]	0.5	1	0.25–4	97.7
	Tigecycline	0.25	0.5	0.06–2	100
	Levofloxacin	>4	>4	≤0.03–>4	23.2
Meropenem non-susceptible (5)[e]	Ceftazidime-avibactam	—[b]	—	0.12–0.25	100
	Ceftazidime	—	—	8–32	0
	Cefepime	—	—	4–>16	0
	Aztreonam	—	—	64–>128	0
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	1–4	60.0
	Imipenem	—	—	2–4	0
	Meropenem	—	—	2–4	0
	Amikacin	—	—	4–>32	60.0
	Colistin (n=1)[d]	—	—	0.25	100
	Tigecycline	—	—	0.25–0.5	100
	Levofloxacin	—	—	0.06–>4	60.0
Colistin-resistant (3)[e]	Ceftazidime-avibactam	—[b]	—	0.12–0.25	100
	Ceftazidime	—	—	0.12–32	66.7
	Cefepime	—	—	≤0.12–0.5	100
	Aztreonam	—	—	0.06–4	100
	Piperacillin-tazobactam	—	—	2–8	100
	Doripenem	—	—	0.03–0.06	100
	Imipenem	—	—	0.12–0.25	100
	Meropenem	—	—	0.03–0.06	100
	Amikacin	—	—	2–8	100
	Colistin (n=3)[d]	—	—	4–4	0
	Tigecycline	—	—	0.12–0.5	100
	Levofloxacin	—	—	1–>4	33.3
Multidrug-resistant (73)[e]	Ceftazidime-avibactam	0.25	0.5	0.03–1	100
	Ceftazidime	32	64	2–>128	4.1
	Cefepime	>16	>16	4–>16	0.0
	Aztreonam	64	128	16–>128	0.0
	Piperacillin-tazobactam	16	>128	2–>128	72.6
	Doripenem	0.06	0.12	0.015–4	97.3
	Imipenem	0.25	0.25	0.06–4	93.2
	Meropenem	0.03	0.06	0.015–4	93.2
	Amikacin	8	16	2–>32	90.4
	Colistin (n=33)[d]	0.5	1	0.25–2	100
	Tigecycline	0.25	0.5	0.06–2	100
	Levofloxacin	>4	>4	0.06–>4	5.5

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Klebsiella pneumoniae					
All (284)	Ceftazidime-avibactam	0.12	1	≤0.015–>128	98.9
	Ceftazidime	1	128	≤0.015–>128	62.3
	Cefepime	0.25	>16	≤0.12–>16	64.4
	Aztreonam	0.25	>128	≤0.015–>128	59.2
	Piperacillin-tazobactam	8	>128	≤0.25–>128	63.0
	Doripenem	0.06	>4	≤0.008–>4	79.6
	Imipenem	0.25	>8	0.06–>8	76.8
	Meropenem	0.06	>8	0.015–>8	79.2
	Amikacin	1	16	0.5–>32	94.4
	Colistin (n=170)[d]	0.5	1	0.25–>4	96.5
	Tigecycline	0.5	2	0.06–8	96.5
	Levofloxacin	0.12	>4	≤0.03–>4	79.2
All, MBL-negative (281)	Ceftazidime-avibactam	0.12	0.5	≤0.015–4	100
	Ceftazidime	0.5	128	≤0.015–>128	63.0
	Cefepime	0.25	>16	≤0.12–>16	65.1
	Aztreonam	0.25	>128	≤0.015–>128	59.8
	Piperacillin-tazobactam	8	>128	≤0.25–>128	63.7
	Doripenem	0.06	>4	≤0.008–>4	80.4
	Imipenem	0.25	>8	0.06–>8	77.6
	Meropenem	0.06	>8	0.015–>8	80.1
	Amikacin	1	16	0.5–>32	94.3
	Colistin (n=167)[d]	0.5	1	0.25–>4	96.4
	Tigecycline	0.5	2	0.06–8	96.8
	Levofloxacin	0.12	>4	≤0.03–>4	79.4
Ceftazidime non-susceptible (107)	Ceftazidime-avibactam	0.5	2	0.06–>128	97.2
	Ceftazidime	32	>128	8–>128	0
	Cefepime	16	>16	0.5–>16	12.2
	Aztreonam	64	>128	1–>128	4.7
	Piperacillin-tazobactam	>128	>128	2–>128	28.0
	Doripenem	0.5	>4	0.03–>4	51.4
	Imipenem	1	>8	0.12–>8	51.4
	Meropenem	0.25	>8	0.03–>8	51.4
	Amikacin	4	32	0.5–>32	86.0
	Colistin (n=69)[d]	0.5	2	0.25–>4	92.8
	Tigecycline	1	2	0.25–8	93.5
	Levofloxacin	2	>4	0.06–>4	52.3
Ceftazidime non-susceptible, MBL-negative (104)	Ceftazidime-avibactam	0.5	2	0.06–4	100
	Ceftazidime	32	>128	8–>128	0
	Cefepime	16	>16	0.5–>16	12.5
	Aztreonam	64	>128	1–>128	4.8
	Piperacillin-tazobactam	>128	>128	2–>128	28.9
	Doripenem	0.12	>4	0.03–>4	52.9
	Imipenem	0.5	>8	0.12–>8	52.9
	Meropenem	0.12	>8	0.03–>8	52.9
	Amikacin	4	32	0.5–>32	85.6
	Colistin (n=66)[d]	0.5	2	0.25–>4	92.4
	Tigecycline	1	2	0.25–8	94.2
	Levofloxacin	2	>4	0.06–>4	51.9
Meropenem non-susceptible (59)	Ceftazidime-avibactam	0.5	4	0.12–>128	94.9
	Ceftazidime	64	>128	1–>128	11.9
	Cefepime	>16	>16	≤0.12–>16	15.3
	Aztreonam	128	>128	8–>128	0
	Piperacillin-tazobactam	>128	>128	32–>128	0
	Doripenem	>4	>4	0.5–>4	1.7
	Imipenem	>8	>8	4–>8	0
	Meropenem	>8	>8	2–>8	0
	Amikacin	8	32	0.5–>32	74.6
	Colistin (n=41)[d]	0.5	2	0.25–>4	90.2
	Tigecycline	1	2	0.25–4	96.6

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Levofloxacin	4	>4	0.06–>4	49.2
Meropenem non-susceptible, MBL-negative (56)	Ceftazidime-avibactam	0.5	2	0.12–4	100
	Ceftazidime	64	>128	1–>128	12.5
	Cefepime	16	>16	≤0.12–>16	16.1
	Aztreonam	128	>128	8–>128	0
	Piperacillin-tazobactam	>128	>128	32–>128	0
	Doripenem	>4	>4	0.5–>4	1.8
	Imipenem	>8	>8	4–>8	0
	Meropenem	>8	>8	2–>8	0
	Amikacin	4	32	0.5–>32	73.2
	Colistin (n=38)[d]	0.5	>4	0.25–>4	89.5
	Tigecycline	1	2	0.25–4	98.2
	Levofloxacin	4	>4	0.06–>4	48.2
Colistin-resistant (6)[e]	Ceftazidime-avibactam	—[b]	—	0.25–2	100
	Ceftazidime	—	—	2–>128	16.7
	Cefepime	—	—	8–>16	0.0
	Aztreonam	—	—	8–>128	0.0
	Piperacillin-tazobactam	—	—	8–>128	16.7
	Doripenem	—	—	0.06–>4	33.3
	Imipenem	—	—	0.12–>8	33.3
	Meropenem	—	—	0.03–>8	33.3
	Amikacin	—	—	4–>32	66.7
	Colistin (n=6)[d]	—	—	>4–>4	0.0
	Tigecycline	—	—	1–4	83.3
	Levofloxacin	—	—	0.06–>4	33.3
Multidrug-resistant (74)	Ceftazidime-avibactam	0.5	2	0.06–>128	96.0
	Ceftazidime	64	>128	1–>128	5.4
	Cefepime	>16	>16	2–>16	6.8
	Aztreonam	128	>128	16–>128	0.0
	Piperacillin-tazobactam	>128	>128	16–>128	9.5
	Doripenem	4	>4	0.03–>4	29.7
	Imipenem	8	>8	0.12–>8	29.7
	Meropenem	8	>8	0.03–>8	29.7
	Amikacin	4	32	0.5–>32	78.4
	Colistin (n=52)[d]	0.5	2	0.25–>4	90.4
	Tigecycline	1	2	0.25–8	90.5
	Levofloxacin	>4	>4	0.06–>4	36.5
Multidrug-resistant, MBL-negative (71)	Ceftazidime-avibactam	0.5	2	0.06–4	100
	Ceftazidime	64	>128	1–>128	5.6
	Cefepime	>16	>16	2–>16	7.0
	Aztreonam	128	>128	16–>128	0.0
	Piperacillin-tazobactam	>128	>128	16–>128	9.9
	Doripenem	4	>4	0.03–>4	31.0
	Imipenem	8	>8	0.12–>8	31.0
	Meropenem	8	>8	0.03–>8	31.0
	Amikacin	4	32	0.5–>32	77.5
	Colistin (n=49)[d]	0.5	>4	0.25–>4	89.8
	Tigecycline	1	2	0.25–8	91.6
	Levofloxacin	>4	>4	0.06–>4	35.2
Klebsiella oxytoca[g]					
All (40)[e]	Ceftazidime-avibactam	0.12	0.25	≤0.015–1	100
	Ceftazidime	0.12	2	0.03–8	97.5
	Cefepime	≤0.12	2	≤0.12–16	92.5
	Aztreonam	0.12	32	≤0.015–>128	82.5
	Piperacillin-tazobactam	2	>128	≤0.25–>128	75.0
	Doripenem	0.06	0.12	0.03–2	97.5
	Imipenem	0.25	4	0.12–>8	87.5
	Meropenem	0.03	0.25	0.015–4	92.5
	Amikacin	1	4	0.5–16	100

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Colistin (n=28)[d]	0.5	1	0.25–1	100
	Tigecycline	0.25	0.5	0.06–4	97.5
	Levofloxacin	0.06	0.12	≤0.03–1	100
Ceftazidime non-susceptible (1)[e]	Ceftazidime-avibactam	—[b]	—	0.5	100
	Ceftazidime	—	—	8	0
	Cefepime	—	—	16	0
	Aztreonam	—	—	64	0
	Piperacillin-tazobactam	—	—	128	0
	Doripenem	—	—	1	100
	Imipenem	—	—	4	0
	Meropenem	—	—	1	100
	Amikacin	—	—	16	100
	Colistin (n=1)[d]	—	—	0.5	100
	Tigecycline	—	—	0.25	100
	Levofloxacin	—	—	1	100
Meropenem non-susceptible (3)[e]	Ceftazidime-avibactam	—[b]	—	0.06–0.25	100
	Ceftazidime	—	—	2–4	100
	Cefepime	—	—	1–4	66.7
	Aztreonam	—	—	16–32	0
	Piperacillin-tazobactam	—	—	128–128	0
	Doripenem	—	—	1–2	66.7
	Imipenem	—	—	4–4	0
	Meropenem	—	—	2–4	0
	Amikacin	—	—	1–4	100
	Colistin (n=3)[d]	—	—	0.25–0.5	100
	Tigecycline	—	—	0.25–0.5	100
	Levofloxacin	—	—	0.06–0.5	100
Multidrug-resistant (2)[e]	Ceftazidime-avibactam	—[b]	—	0.06–0.5	100
	Ceftazidime	—	—	2–8	50.0
	Cefepime	—	—	1–16	50.0
	Aztreonam	—	—	16–64	0.0
	Piperacillin-tazobactam	—	—	128–128	0.0
	Doripenem	—	—	1–1	100
	Imipenem	—	—	4–4	0.0
	Meropenem	—	—	1–4	50.0
	Amikacin	—	—	4–16	100
	Colistin (n=2)[d]	—	—	0.5–0.5	100
	Tigecycline	—	—	0.25–0.25	100
	Levofloxacin	—	—	0.5–1	100
Enterobacter spp.					
All (102)[e,h]	Ceftazidime-avibactam	0.25	1	0.03–4	100
	Ceftazidime	0.5	128	0.03–>128	65.7
	Cefepime	≤0.12	>16	≤0.12–>16	80.4
	Aztreonam	0.12	64	≤0.015–>128	66.7
	Piperacillin-tazobactam	4	>128	1–>128	74.5
	Doripenem	0.06	0.25	0.015–>4	97.1
	Imipenem	1	2	0.12–>8	83.3
	Meropenem	0.06	0.25	0.015–>8	96.1
	Amikacin	1	4	0.5–>32	92.2
	Colistin (n=62)[d]	0.5	1	≤0.12–>4	93.6
	Tigecycline	0.5	2	0.25–2	100
	Levofloxacin	0.06	1	≤0.03–>4	90.2
Ceftazidime non-susceptible (35)[e]	Ceftazidime-avibactam	0.5	2	0.06–4	100
	Ceftazidime	64	>128	8–>128	0
	Cefepime	8	>16	≤0.12–>16	42.9
	Aztreonam	64	128	1–>128	5.7
	Piperacillin-tazobactam	64	>128	1–>128	25.7
	Doripenem	0.12	1	0.06–>4	91.4
	Imipenem	0.5	4	0.25–>8	82.9

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Meropenem	0.12	2	0.03–>8	88.6
	Amikacin	2	32	0.5–>32	77.1
	Colistin (n=18)[d]	0.5	2	0.25–>4	94.4
	Tigecycline	1	2	0.25–2	100
	Levofloxacin	0.25	>4	≤0.03–>4	71.4
Meropenem non-susceptible (4)[e]	Ceftazidime-avibactam	—[b]	—	0.12–2	100
	Ceftazidime	—	—	8–>128	0
	Cefepime	—	—	2–>16	25.0
	Aztreonam	—	—	16–>128	0
	Piperacillin-tazobactam	—	—	32–>128	0
	Doripenem	—	—	1–>4	25.0
	Imipenem	—	—	4–>8	0
	Meropenem	—	—	2–>8	0
	Amikacin	—	—	4–32	75.0
	Colistin (n=2)[d]	—	—	0.5–1	100
	Tigecycline	—	—	0.25–2	100
	Levofloxacin	—	—	0.12–>4	75.0
Colistin-resistant (4)[e]	Ceftazidime-avibactam	—[b]	—	0.12–1	100
	Ceftazidime	—	—	0.12–128	75.0
	Cefepime	—	—	≤0.12–0.5	100
	Aztreonam	—	—	0.03–64	75.0
	Piperacillin-tazobactam	—	—	1–128	75.0
	Doripenem	—	—	0.03–0.12	100
	Imipenem	—	—	1–2	50.0
	Meropenem	—	—	0.06–0.25	100
	Amikacin	—	—	1–2	100
	Colistin (n=4)[d]	—	—	>4–>4	0.0
	Tigecycline	—	—	0.5–1	100
	Levofloxacin	—	—	0.06–0.12	100
Multidrug-resistant (16)[e]	Ceftazidime-avibactam	1	4	0.12–4	100
	Ceftazidime	128	>128	8–>128	0
	Cefepime	>16	>16	0.5–>16	6.3
	Aztreonam	64	>128	32–>128	0
	Piperacillin-tazobactam	>128	>128	4–>128	12.5
	Doripenem	0.25	>4	0.06–>4	81.3
	Imipenem	0.5	>8	0.25–>8	68.8
	Meropenem	0.12	>8	0.03–>8	81.3
	Amikacin	4	>32	1–>32	50.0
	Colistin (n=7)[d]	—[b]	—	0.5–>4	85.7
	Tigecycline	1	2	0.25–2	100
	Levofloxacin	>4	>4	0.12–>4	43.8
Citrobacter spp.[g]					
All (52)[e,i]	Ceftazidime-avibactam	0.12	0.5	≤0.015–2	100
	Ceftazidime	0.5	64	≤0.015–>128	67.3
	Cefepime	≤0.12	>16	≤0.12–>16	76.9
	Aztreonam	0.25	64	0.03–>128	57.7
	Piperacillin-tazobactam	4	128	1–>128	71.2
	Doripenem	0.06	1	0.015–>4	94.2
	Imipenem	0.5	2	0.12–>8	76.9
	Meropenem	0.03	2	0.015–>8	88.5
	Amikacin	2	4	0.5–>32	92.3
	Colistin (n=29)[d]	0.5	1	≤0.12–1	100
	Tigecycline	0.25	1	0.06–4	98.1
	Levofloxacin	0.12	>4	≤0.03–>4	82.7
Ceftazidime non-susceptible (17)[e]	Ceftazidime-avibactam	0.25	1	0.12–1	100
	Ceftazidime	32	128	8–>128	0
	Cefepime	>16	>16	0.25–>16	35.3
	Aztreonam	32	>128	16–>128	0
	Piperacillin-tazobactam	32	>128	4–>128	41.2

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Doripenem	0.12	>4	0.03–>4	82.4
	Imipenem	1	>8	0.25–>8	70.6
	Meropenem	0.06	>8	0.03–>8	76.5
	Amikacin	2	>32	1–>32	88.2
	Colistin (n=8)[d]	—[b]	—	0.25–1	100
	Tigecycline	0.5	2	0.25–4	94.1
	Levofloxacin	0.5	>4	≤0.03–>4	64.7
Meropenem non-susceptible (6)[e]	Ceftazidime-avibactam	—[b]	—	0.06–1	100
	Ceftazidime	—	—	4–128	33.3
	Cefepime	—	—	1–>16	33.3
	Aztreonam	—	—	16–>128	0
	Piperacillin-tazobactam	—	—	64–>128	0
	Doripenem	—	—	1–>4	50.0
	Imipenem	—	—	2–>8	0
	Meropenem	—	—	2–>8	0
	Amikacin	—	—	1–>32	66.7
	Colistin (n=4)[d]	—	—	0.25–1	100
	Tigecycline	—	—	0.25–2	100
	Levofloxacin	—	—	≤0.03–>4	50.0
Multidrug-resistant (8)[e]	Ceftazidime-avibactam	—[b]	—	0.06–1	100
	Ceftazidime	—	—	4–>128	12.5
	Cefepime	—	—	2–>16	12.5
	Aztreonam	—	—	16–>128	0
	Piperacillin-tazobactam	—	—	4–>128	12.5
	Doripenem	—	—	0.12–>4	62.5
	Imipenem	—	—	0.5–>8	37.5
	Meropenem	—	—	0.06–>8	37.5
	Amikacin	—	—	1–>32	62.5
	Colistin (n=5)[d]	—	—	0.25–1	100
	Tigecycline	—	—	0.25–4	87.5
	Levofloxacin	—	—	≤0.03–>4	37.5
Proteeae					
All (112)[j]	Ceftazidime-avibactam	0.06	0.12	≤0.015–64	99.1
	Ceftazidime	0.06	2	0.03–64	92.9
	Cefepime	≤0.12	0.5	≤0.12–>16	93.8
	Aztreonam	≤0.015	0.5	≤0.015–4	100
	Piperacillin-tazobactam	≤0.25	1	≤0.25–>128	98.2
	Doripenem	0.25	0.5	0.015–>4	99.1
	Imipenem	2	4	0.12–>8	23.2
	Meropenem	0.12	0.25	0.03–8	99.1
	Amikacin	4	8	0.5–>32	96.4
	Colistin (n=55)[d]	>4	>4	2–>4	1.8
	Tigecycline	2	4	≤0.015–8	65.2
	Levofloxacin	0.06	2	≤0.03–>4	92.0
All, MBL-negative (111)	Ceftazidime-avibactam	0.06	0.12	≤0.015–8	100
	Ceftazidime	0.06	0.5	0.03–32	93.7
	Cefepime	≤0.12	0.25	≤0.12–>16	94.6
	Aztreonam	≤0.015	0.5	≤0.015–4	100
	Piperacillin-tazobactam	≤0.25	1	≤0.25–32	99.1
	Doripenem	0.25	0.5	0.015–1	100
	Imipenem	2	4	0.12–8	23.4
	Meropenem	0.12	0.25	0.03–0.5	100
	Amikacin	4	8	0.5–>32	96.4
	Colistin (n=55)[d]	>4	>4	2–>4	1.8
	Tigecycline	2	4	≤0.015–8	65.8
	Levofloxacin	0.06	2	≤0.03–>4	91.9
Ceftazidime-non-susceptible (8)	Ceftazidime-avibactam	—[b]	—	0.06–64	87.5
	Ceftazidime	—	—	8–64	0
	Cefepime	—	—	≤0.12–>16	75.0

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Aztreonam	—	—	0.06–4	100
	Piperacillin-tazobactam	—	—	0.5–>128	75.0
	Doripenem	—	—	0.25–>4	87.5
	Imipenem	—	—	1–>8	12.5
	Meropenem	—	—	0.12–8	87.5
	Amikacin	—	—	2–32	62.5
	Colistin (n=5)[d]	—	—	>4–>4	0
	Tigecycline	—	—	≤0.015–4	37.5
	Levofloxacin	—	—	0.06–4	75.0
Ceftazidime-non-susceptible, MBL negative (7)	Ceftazidime-avibactam	—[b]	—	0.06–8	100
	Ceftazidime	—	—	8–32	0
	Cefepime	—	—	≤0.12–>16	85.7
	Aztreonam	—	—	0.25–4	100
	Piperacillin-tazobactam	—	—	0.5–32	85.7
	Doripenem	—	—	0.25–0.5	100
	Imipenem	—	—	1–4	14.3
	Meropenem	—	—	0.12–0.25	100
	Amikacin	—	—	2–32	57.1
	Colistin (n=5)[d]	—	—	>4–>4	0
	Tigecycline	—	—	≤0.015–4	42.9
	Levofloxacin	—	—	0.06–4	71.4
Meropenem non-susceptible (1)[k]	Ceftazidime-avibactam	—[b]	—	64	0
	Ceftazidime	—	—	64	0
	Cefepime	—	—	16	0
	Aztreonam	—	—	0.06	100
	Piperacillin-tazobactam	—	—	>128	0
	Doripenem	—	—	>4	0
	Imipenem	—	—	>8	0
	Meropenem	—	—	8	0
	Amikacin	—	—	2	100
	Colistin (n=1)[d]	—	—	>4	0
	Tigecycline	—	—	4	0
	Levofloxacin	—	—	2	100
Multidrug-resistant (4)	Ceftazidime-avibactam	—[b]	—	0.03–64	75.0
	Ceftazidime	—	—	0.12–64	75.0
	Cefepime	—	—	16–>16	0
	Aztreonam	—	—	0.06–2	100
	Piperacillin-tazobactam	—	—	1–>128	75.0
	Doripenem	—	—	0.25–>4	75.0
	Imipenem	—	—	2–>8	0.0
	Meropenem	—	—	0.06–8	75.0
	Amikacin	—	—	2–>32	75.0
	Colistin (n=2)[d]	—	—	>4–>4	0
	Tigecycline	—	—	4–8	0
	Levofloxacin	—	—	2–>4	25.0
Multidrug-resistant, MBL-negative (3)	Ceftazidime-avibactam	—[b]	—	0.03–0.06	100
	Ceftazidime	—	—	0.12–2	100
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	0.5–2	100
	Piperacillin-tazobactam	—	—	1–2	100
	Doripenem	—	—	0.25–0.5	100
	Imipenem	—	—	2–4	0
	Meropenem	—	—	0.06–0.12	100
	Amikacin	—	—	4–>32	66.7
	Colistin (n=1)[d]	—	—	>4	0
	Tigecycline	—	—	4–8	0
	Levofloxacin	—	—	>4–>4	0
Other *Enterobacteriaceae*[g]					
All (35)[e,l]	Ceftazidime-avibactam	0.12	0.25	0.03–0.5	100

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Ceftazidime	0.25	0.5	0.06–8	97.1
	Cefepime	≤0.12	0.25	≤0.12–>16	97.1
	Aztreonam	0.12	0.25	0.03–>128	97.1
	Piperacillin-tazobactam	1	4	≤0.25–>128	97.1
	Doripenem	0.12	0.25	0.06–>4	97.1
	Imipenem	0.5	2	0.25–>8	85.7
	Meropenem	0.06	0.12	0.06–>8	97.1
	Amikacin	2	4	0.5–16	100
	Colistin (n=21)[d]	>4	>4	0.25–>4	9.5
	Tigecycline	1	2	0.12–4	91.4
	Levofloxacin	0.12	0.5	≤0.03–2	100
Ceftazidime-non-susceptible (1)[e]	Ceftazidime-avibactam	—	—	0.5	100
	Ceftazidime	—[b]	—	8	0
	Cefepime	—	—	>16	0
	Aztreonam	—	—	>128	0
	Piperacillin-tazobactam	—	—	>128	0
	Doripenem	—	—	>4	0
	Imipenem	—	—	>8	0
	Meropenem	—	—	>8	0
	Amikacin	—	—	16	100
	Colistin (n=0)[d]	—	—	ND[d]	ND
	Tigecycline	—	—	4	0
	Levofloxacin	—	—	0.25	100
Meropenem non-susceptible (1)[e]	Ceftazidime-avibactam	—[b]	—	0.5	100
	Ceftazidime	—	—	8	0
	Cefepime	—	—	>16	0
	Aztreonam	—	—	>128	0
	Piperacillin-tazobactam	—	—	>128	0
	Doripenem	—	—	>4	0
	Imipenem	—	—	>8	0
	Meropenem	—	—	>8	0
	Amikacin	—	—	16	100
	Colistin (n=0)[d]	—	—	ND[d]	ND
	Tigecycline	—	—	4	0
	Levofloxacin	—	—	0.25	100
Multidrug-resistant (1)[e]	Ceftazidime-avibactam	—[b]	—	0.5	100
	Ceftazidime	—	—	8	0
	Cefepime	—	—	>16	0
	Aztreonam	—	—	>128	0
	Piperacillin-tazobactam	—	—	>128	0
	Doripenem	—	—	>4	0
	Imipenem	—	—	>8	0
	Meropenem	—	—	>8	0
	Amikacin	—	—	16	100
	Colistin (n=0)[d]	—	—	ND[d]	ND
	Tigecycline	—	—	4	0
	Levofloxacin	—	—	0.25	100
Pseudomonas aeruginosa[g]					
All (200)	Ceftazidime-avibactam	2	32	0.12–>128	86.0
	Ceftazidime	4	128	0.25–>128	68.5
	Cefepime	4	>16	≤0.12–>16	68.0
	Aztreonam	8	>128	0.12–>128	56.0
	Piperacillin-tazobactam	16	>128	1–>128	55.0
	Doripenem	1	>4	0.03–>4	67.0
	Imipenem	2	>8	0.5–>8	58.0
	Meropenem	0.5	>8	≤0.06–>8	66.5
	Amikacin	4	>32	≤0.25–>32	83.5
	Colistin (n=142)[d]	1	2	0.25–4	96.5
	Levofloxacin	1	>4	≤0.03–>4	75.5

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
All, MBL-negative (187)	Ceftazidime-avibactam	2	8	0.12–128	90.9
	Ceftazidime	4	128	0.25–>128	72.7
	Cefepime	4	>16	≤0.12–>16	71.7
	Aztreonam	8	>128	0.12–>128	56.7
	Piperacillin-tazobactam	16	>128	1–>128	57.8
	Doripenem	1	>4	0.03–>4	71.7
	Imipenem	2	>8	0.5–>8	62.0
	Meropenem	0.5	>8	≤0.06–>8	70.6
	Amikacin	4	>32	≤0.25–>32	88.8
	Colistin (n=131)[d]	1	2	0.25–4	96.2
	Levofloxacin	1	>4	≤0.03–>4	78.1
Ceftazidime-non-susceptible (63)	Ceftazidime-avibactam	8	64	2–>128	55.6
	Ceftazidime	64	128	16–>128	0
	Cefepime	16	>16	4–>16	12.7
	Aztreonam	64	>128	4–>128	12.7
	Piperacillin-tazobactam	>128	>128	8–>128	3.2
	Doripenem	>4	>4	0.25–>4	30.2
	Imipenem	>8	>8	1–>8	23.8
	Meropenem	>8	>8	0.12–>8	33.3
	Amikacin	16	>32	2–>32	55.6
	Colistin (n=43)[d]	1	2	0.5–2	100
	Levofloxacin	4	>4	0.25–>4	47.6
Ceftazidime-non-susceptible, MBL-negative (51)	Ceftazidime-avibactam	8	64	2–128	66.7
	Ceftazidime	64	128	16–>128	0
	Cefepime	>16	>16	4–>16	13.7
	Aztreonam	128	>128	4–>128	5.9
	Piperacillin-tazobactam	>128	>128	8–>128	2.0
	Doripenem	>4	>4	0.25–>4	37.3
	Imipenem	>8	>8	1–>8	29.4
	Meropenem	>8	>8	0.12–>8	39.2
	Amikacin	8	>32	2–>32	66.7
	Colistin (n=33)[d]	1	2	0.5–2	100
	Levofloxacin	2	>4	0.25–>4	51.0
Meropenem non-susceptible (67)	Ceftazidime-avibactam	8	64	2–>128	67.2
	Ceftazidime	64	128	2–>128	37.3
	Cefepime	16	>16	2–>16	26.9
	Aztreonam	32	>128	4–>128	19.4
	Piperacillin-tazobactam	64	>128	8–>128	23.9
	Doripenem	>4	>4	0.5–>4	4.5
	Imipenem	>8	>8	2–>8	4.5
	Meropenem	>8	>8	4–>8	0
	Amikacin	16	>32	2–>32	56.7
	Colistin (n=48)[d]	2	2	0.5–4	97.9
	Levofloxacin	>4	>4	0.25–>4	37.3
Meropenem non-susceptible, MBL-negative (55)	Ceftazidime-avibactam	8	32	2–128	78.2
	Ceftazidime	64	128	2–>128	43.6
	Cefepime	>16	>16	2–>16	29.1
	Aztreonam	64	>128	4–>128	14.6
	Piperacillin-tazobactam	>128	>128	8–>128	25.5
	Doripenem	>4	>4	0.5–>4	5.5
	Imipenem	>8	>8	2–>8	5.5
	Meropenem	>8	>8	4–>8	0
	Amikacin	8	>32	2–>32	67.3
	Colistin (n=37)[d]	1	2	0.5–4	97.3
	Levofloxacin	>4	>4	0.25–>4	38.2
Multidrug-resistant (47)	Ceftazidime-avibactam	8	64	2–>128	57.5
	Ceftazidime	64	128	2–>128	14.9
	Cefepime	>16	>16	16–>16	0
	Aztreonam	128	>128	8–>128	2.1

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Piperacillin-tazobactam	>128	>128	16–>128	2.1
	Doripenem	>4	>4	1–>4	4.3
	Imipenem	>8	>8	1–>8	6.4
	Meropenem	>8	>8	0.5–>8	6.4
	Amikacin	32	>32	2–>32	48.9
	Colistin (n=29)[d]	2	2	0.5–2	100
	Levofloxacin	>4	>4	0.25–>4	21.3
Multidrug-resistant, MBL-negative (39)	Ceftazidime-avibactam	8	64	2–128	66.7
	Ceftazidime	128	>128	2–>128	18.0
	Cefepime	>16	>16	16–>16	0
	Aztreonam	>128	>128	16–>128	0
	Piperacillin-tazobactam	>128	>128	16–>128	2.6
	Doripenem	>4	>4	1–>4	5.1
	Imipenem	>8	>8	1–>8	7.7
	Meropenem	>8	>8	0.5–>8	7.7
	Amikacin	16	>32	2–>32	56.4
	Colistin (n=22)[d]	1	2	0.5–2	100
	Levofloxacin	>4	>4	0.25–>4	23.1

[a] MBL-negative, no gene encoding a metallo-β-lactamase was detected by polymerase chain reaction assay.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only. ND, not determined; MIC range and % susceptible were not determined for n=0 isolates.

[e] All isolates were MBL-negative.

[f] Excluded isolates of Proteeae and *Serratia* spp., which are intrinsically resistant to colistin.

[g] No colistin-resistant isolates were collected.

[h] *Enterobacter* spp. included *Enterobacter aerogenes* (n=34), *Enterobacter asburiae* (n=7), *Enterobacter cloacae* (n=59), *Enterobacter kobei* (n=1), and *Enterobacter ludwigii* (n=1).

[i] *Citrobacter* spp. included *Citrobacter braakii* (n=3), *Citrobacter freundii* (n=37), and *Citrobacter koseri* (n=12).

[j] Proteeae included *Morganella morganii* (n=29), *Proteus mirabilis* (n=58), *Proteus penneri* (n=1), *Proteus vulgaris* (n=17), *Providencia rettgeri* (n=5), and *Providencia stuartii* (n=2).

[k] The one meropenem non-susceptible Proteeae isolate carried an MBL.

[l] Other *Enterobacteriaceae* included *Raoultella ornithinolytica* (n=3) and *Serratia marcescens* (n=32).

Table S5B. Colombia - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 357 isolates of β-lactamase-positive *Enterobacteriaceae* (n=279) and *P. aeruginosa* (n=78) collected as part of the INFORM global surveillance program in 2012–2015.

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae (279)					
OSBL-positive (12)	Ceftazidime-avibactam	0.5	1	0.12–2	100
	Ceftazidime	4	32	2–128	58.3
	Cefepime	0.5	2	0.25–2	100
	Aztreonam	0.5	4	0.25–128	91.7
	Piperacillin-tazobactam	>128	>128	8–>128	8.3
	Doripenem	0.06	0.12	0.06–0.12	100
	Imipenem	0.25	0.5	0.12–0.5	100
	Meropenem	0.03	0.06	0.03–0.12	100
	Amikacin	1	2	0.5–4	100
	Colistin (n=4)[d]	—[b]	—	0.25–1	100
	Tigecycline	0.5	1	0.25–2	100
	Levofloxacin	0.06	0.12	0.03–1	100
ESBL-positive (140)[e]	Ceftazidime-avibactam	0.25	0.5	0.03–1	100
	Ceftazidime	32	64	1–>128	13.6
	Cefepime	>16	>16	≤0.12–>16	7.1
	Aztreonam	32	128	0.5–>128	3.6
	Piperacillin-tazobactam	8	128	0.5–>128	72.1
	Doripenem	0.06	0.12	0.015–1	100
	Imipenem	0.25	0.25	0.06–4	97.9
	Meropenem	0.03	0.06	0.015–2	99.3
	Amikacin	4	16	0.5–>32	95.7
	Colistin (n=74)[d]	0.5	1	0.25–>4	98.6
	Tigecycline	0.5	2	0.06–8	96.4
	Levofloxacin	>4	>4	≤0.03–>4	32.9
AmpC-positive (33)[f]	Ceftazidime-avibactam	0.25	2	0.03–4	100
	Ceftazidime	32	128	0.06–>128	33.3
	Cefepime	0.25	8	≤0.12–>16	78.8
	Aztreonam	8	64	≤0.015–128	39.4
	Piperacillin-tazobactam	8	>128	≤0.25–>128	72.7
	Doripenem	0.12	0.25	0.03–>4	97.0
	Imipenem	0.5	2	0.12–>8	60.6
	Meropenem	0.06	0.25	0.015–>8	93.9
	Amikacin	4	8	0.5–32	93.9
	Colistin (n=12)[d]	1	>4	0.25–>4	75.0
	Tigecycline	0.5	2	0.06–4	97.0
	Levofloxacin	0.25	>4	≤0.03–>4	69.7
ESBL-positive + AmpC-positive (6)[g]	Ceftazidime-avibactam	—[b]	—	0.25–2	100
	Ceftazidime	—	—	4–>128	16.7
	Cefepime	—	—	8–>16	0
	Aztreonam	—	—	64–>128	0
	Piperacillin-tazobactam	—	—	32–>128	0
	Doripenem	—	—	0.03–1	100
	Imipenem	—	—	0.25–>8	66.7
	Meropenem	—	—	0.03–1	100
	Amikacin	—	—	1–>32	66.7
	Colistin (n=1)[d]	—	—	0.5	100
	Tigecycline	—	—	0.12–4	83.3
	Levofloxacin	—	—	0.06–>4	16.7
KPC-positive (84)[h]	Ceftazidime-avibactam	0.5	2	0.03–4	100

	Ceftazidime	16	>128	0.5–>128	22.6
	Cefepime	16	>16	≤0.12–>16	26.2
	Aztreonam	128	>128	4–>128	3.6
	Piperacillin-tazobactam	>128	>128	16–>128	1.2
	Doripenem	4	>4	0.06–>4	25.0
	Imipenem	8	>8	0.12–>8	3.6
	Meropenem	8	>8	0.03–>8	15.5
	Amikacin	4	32	0.5–>32	76.2
	Colistin (n=58)[d]	0.5	2	0.25–>4	91.4
	Tigecycline	0.5	2	0.12–4	96.4
	Levofloxacin	1	>4	≤0.03–>4	57.1
MBL-positive (4)[i]	Ceftazidime-avibactam	—[b]	—	64–>128	0
	Ceftazidime	—	—	64–>128	0
	Cefepime	—	—	16–>16	0
	Aztreonam	—	—	0.06–64	25.0
	Piperacillin-tazobactam	—	—	>128–>128	0
	Doripenem	—	—	4–>4	0
	Imipenem	—	—	8–>8	0
	Meropenem	—	—	4–>8	0
	Amikacin	—	—	2–16	100
	Colistin (n=4)[d]	—	—	0.25–>4	75.0
	Tigecycline	—	—	0.5–4	50.0
	Levofloxacin	—	—	0.5–>4	75.0
P. aeruginosa (78)					
KPC-positive (21)[j,k]	Ceftazidime-avibactam	8	64	4–128	61.9
	Ceftazidime	128	>128	8–>128	4.8
	Cefepime	>16	>16	16–>16	0
	Aztreonam	>128	>128	64–>128	0
	Piperacillin-tazobactam	>128	>128	32–>128	0
	Doripenem	>4	>4	>4–>4	0
	Imipenem	>8	>8	>8–>8	0
	Meropenem	>8	>8	>8–>8	0
	Amikacin	16	>32	2–>32	52.4
	Colistin (n=14)[d]	1	2	0.5–2	100
	Levofloxacin	>4	>4	0.25–>4	19.0
MBL-positive (13)[j,l]	Ceftazidime-avibactam	32	128	8–>128	15.4
	Ceftazidime	32	128	8–128	7.7
	Cefepime	16	>16	8–>16	15.4
	Aztreonam	16	32	4–64	46.2
	Piperacillin-tazobactam	64	128	16–128	15.4
	Doripenem	>4	>4	4–>4	0
	Imipenem	>8	>8	>8–>8	0
	Meropenem	>8	>8	2–>8	7.7
	Amikacin	>32	>32	16–>32	7.7
	Colistin (n=11)[d]	2	2	1–2	100
	Levofloxacin	>4	>4	0.25–>4	38.5
No acquired β-lactamase detected (44)[j]	Ceftazidime-avibactam	4	32	1–128	88.6
	Ceftazidime	4	128	2–128	70.5
	Cefepime	8	>16	1–>16	56.8
	Aztreonam	32	64	4–>128	36.4
	Piperacillin-tazobactam	32	>128	4–>128	45.5
	Doripenem	>4	>4	0.25–>4	27.3
	Imipenem	>8	>8	2–>8	9.1
	Meropenem	8	>8	0.25–>8	22.7
	Amikacin	4	>32	2–>32	79.5
	Colistin (n=26)[d]	2	2	0.5–4	96.2
	Levofloxacin	2	>4	0.25–>4	59.1

[a] OSBL, original-spectrum β-lactamase (e.g. TEM-1, SHV-1, SHV-11); ESBL, extended-spectrum β-lactamase; MBL, metallo-β-lactamase.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only.

[e] Included isolates carrying CTX-M-1; CTX-M-2; CTX-M-3; CTX-M-8; CTX-M-12; CTX-M-15; CTX-M-27; CTX-M-55; CTX-M-65; CTX-M-15 and CTX-M-2; CTX-M-15 and CTX-M-12; CTX-M-15 and CTX-M-27; CTX-M-15 and CTX-M-65; CTX-M-2 and SHV-41; CTX-M-15 and SHV-12; SHV-5; SHV-12; with or without a SHV-OSBL and/or TEM-OSBL.

[f] Included isolates carrying CMY-2 and/ or the chromosomal AmpCs common to *Citrobacter* spp., *Enterobacter* spp., *M. morganii*, and *Serratia* spp. with or without a TEM-OSBL.

[g] Included isolates carrying CTX-M-15 and CMY-2; the chromosomal ESBL common to *K. oxytoca* and CMY-2; and the chromosomal AmpC common to *Enterobacter* spp. with CTX-M-12 or CTX-M-12 and SHV-5; with or without a TEM-OSBL.

[h] Included isolates carrying KPC-2; KPC-3; KPC-2 and CTX-M-1; KPC-2 and CTX-M-12; KPC-2 and CTX-M-15; KPC-3 and SHV-12; KPC-2 and CTX-M-1 and CTX-M-2; KPC-3 and CTX-M-12 and SHV-12; and the chromosomal β-lactamases common to *Citrobacter* spp., *Enterobacter* spp., *Serratia* spp., and *K. oxytoca* with or without a SHV-OSBL and/or TEM-OSBL.

[i] Included isolates carrying NDM-1 and CTX-M-15, and NDM-1 and the chromosomal AmpC common to *Providencia* spp., with or without a SHV-OSBL and/or TEM-OSBL.

[j] Assumed to carry the chromosomal AmpC common to *P. aeruginosa*.

[k] Isolates carrying KPC-2.

[l] Isolates carrying VIM-2.

Table S6A. Mexico - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 2,319 isolates of *Enterobacteriaceae* and *P. aeruginosa* collected as part of the INFORM global surveillance program in 2012-2015.

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae					
All (1,862)	Ceftazidime-avibactam	0.12	0.5	≤0.015–>128	99.4
	Ceftazidime	0.5	64	0.03–>128	61.4
	Cefepime	≤0.12	>16	≤0.12–>16	63.7
	Aztreonam	0.12	64	≤0.015–>128	61.6
	Piperacillin-tazobactam	4	32	≤0.25–>128	85.0
	Doripenem	0.06	0.25	≤0.008–>4	98.7
	Imipenem	0.25	2	0.06–>8	88.1
	Meropenem	0.03	0.12	0.008–>8	98.8
	Amikacin	2	8	≤0.25–>32	96.2
	Colistin (n=1,181)[d]	1	>4	≤0.12–>4	85.4
	Tigecycline	0.5	2	0.06–8	93.0
	Levofloxacin	0.5	>4	≤0.03–>4	65.0
All, MBL-negative (1,851)	Ceftazidime-avibactam	0.12	0.5	≤0.015–128	100
	Ceftazidime	0.5	64	0.03–>128	61.7
	Cefepime	≤0.12	>16	≤0.12–>16	64.0
	Aztreonam	0.12	64	≤0.015–>128	61.5
	Piperacillin-tazobactam	4	32	≤0.25–>128	85.4
	Doripenem	0.06	0.25	≤0.008–>4	99.2
	Imipenem	0.25	2	0.06–>8	88.7
	Meropenem	0.03	0.12	0.008–>8	99.4
	Amikacin	2	8	≤0.25–>32	96.5
	Colistin (n=1,171)[d]	1	>4	≤0.12–>4	85.7
	Tigecycline	0.5	2	0.06–8	93.0
	Levofloxacin	0.5	>4	≤0.03–>4	65.1
Ceftazidime non-susceptible (719)	Ceftazidime-avibactam	0.25	1	≤0.015–>128	98.5
	Ceftazidime	32	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	11.0
	Aztreonam	64	128	0.06–>128	2.8
	Piperacillin-tazobactam	16	128	≤0.25–>128	66.8
	Doripenem	0.06	0.12	0.015–>4	97.1
	Imipenem	0.25	0.5	0.06–>8	96.0
	Meropenem	0.06	0.12	0.015–>8	96.9
	Amikacin	4	16	≤0.25–>32	91.1
	Colistin (n=461)[d]	1	1	≤0.12–>4	97.0
	Tigecycline	0.5	2	0.06–8	96.2
	Levofloxacin	>4	>4	≤0.03–>4	34.1
Ceftazidime non-susceptible, MBL-negative (709)	Ceftazidime-avibactam	0.25	0.5	≤0.015–128	99.9
	Ceftazidime	32	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	11.0
	Aztreonam	64	128	0.06–>128	2.0
	Piperacillin-tazobactam	16	128	≤0.25–>128	67.7
	Doripenem	0.06	0.12	0.015–>4	98.5
	Imipenem	0.25	0.5	0.06–>8	97.3
	Meropenem	0.06	0.12	0.015–>8	98.3
	Amikacin	4	16	≤0.25–>32	91.8
	Colistin (n=451)[d]	0.5	1	≤0.12–>4	97.8
	Tigecycline	0.5	2	0.06–8	96.3
	Levofloxacin	>4	>4	≤0.03–>4	33.9
Meropenem non-susceptible (22)	Ceftazidime-avibactam	2	64	0.25–>128	54.6
	Ceftazidime	128	>128	8–>128	0
	Cefepime	>16	>16	1–>16	9.1

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Aztreonam	128	>128	0.06–>128	27.3
	Piperacillin-tazobactam	>128	>128	16–>128	4.6
	Doripenem	4	>4	1–>4	4.6
	Imipenem	4	>8	0.25–>8	13.6
	Meropenem	4	>8	2–>8	0
	Amikacin	16	>32	1–>32	63.6
	Colistin (n=20)[d]	1	>4	0.25–>4	70.0
	Tigecycline	0.5	4	0.12–4	86.4
	Levofloxacin	4	>4	0.12–>4	45.5
Meropenem non-susceptible, MBL-negative (12)	Ceftazidime-avibactam	0.5	2	0.25–8	100
	Ceftazidime	>128	>128	8–>128	0
	Cefepime	>16	>16	1–>16	8.3
	Aztreonam	>128	>128	8–>128	0
	Piperacillin-tazobactam	>128	>128	16–>128	8.3
	Doripenem	4	>4	1–>4	8.3
	Imipenem	4	>8	0.25–>8	25.0
	Meropenem	4	>8	2–>8	0
	Amikacin	8	32	1–>32	83.3
	Colistin (n=10)[d]	1	>4	0.25–>4	80.0
	Tigecycline	0.5	4	0.12–4	83.3
	Levofloxacin	>4	>4	0.12–>4	41.7
Colistin-resistant (25)[e]	Ceftazidime-avibactam	0.12	32	0.03–>128	84.0
	Ceftazidime	0.5	>128	0.12–>128	64.0
	Cefepime	≤0.12	>16	≤0.12–>16	76.0
	Aztreonam	0.25	128	0.06–>128	80.0
	Piperacillin-tazobactam	4	>128	0.5–>128	76.0
	Doripenem	0.06	>4	≤0.008–>4	80.0
	Imipenem	1	8	0.12–>8	68.0
	Meropenem	0.06	>8	0.03–>8	80.0
	Amikacin	2	>32	1–>32	76.0
	Colistin (n=25)[d]	>4	>4	4–>4	0
	Tigecycline	0.5	2	0.12–4	96.0
	Levofloxacin	0.12	>4	0.06–>4	80.0
Colistin-resistant, MBL-negative (21)[e]	Ceftazidime-avibactam	0.12	0.5	0.03–1	100
	Ceftazidime	0.5	64	0.12–>128	76.2
	Cefepime	≤0.12	2	≤0.12–>16	90.5
	Aztreonam	0.12	128	0.06–128	81.0
	Piperacillin-tazobactam	4	8	0.5–>128	90.5
	Doripenem	0.06	0.12	≤0.008–4	95.2
	Imipenem	0.5	2	0.12–2	81.0
	Meropenem	0.06	0.12	0.03–4	95.2
	Amikacin	2	4	1–>32	90.5
	Colistin (n=21)[d]	>4	>4	4–>4	0
	Tigecycline	0.5	1	0.12–2	100
	Levofloxacin	0.12	>4	0.06–>4	85.7
Multidrug-resistant (442)	Ceftazidime-avibactam	0.25	1	≤0.015–>128	98.2
	Ceftazidime	32	>128	0.25–>128	1.1
	Cefepime	>16	>16	0.25–>16	1.1
	Aztreonam	64	>128	0.12–>128	1.4
	Piperacillin-tazobactam	16	>128	0.5–>128	65.2
	Doripenem	0.06	0.12	0.015–>4	95.9
	Imipenem	0.25	0.5	0.06–>8	95.5
	Meropenem	0.03	0.12	0.015–>8	95.7
	Amikacin	8	32	0.5–>32	88.5
	Colistin (n=282)[d]	0.5	1	≤0.12–>4	95.7
	Tigecycline	0.25	2	0.06–8	95.3
	Levofloxacin	>4	>4	≤0.03–>4	4.1
Multidrug-resistant, MBL-negative (434)	Ceftazidime-avibactam	0.25	1	≤0.015–8	100
	Ceftazidime	32	>128	0.25–>128	1.2

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Cefepime	>16	>16	0.25–>16	1.2
	Aztreonam	64	>128	0.12–>128	0.5
	Piperacillin-tazobactam	16	128	0.5–>128	66.4
	Doripenem	0.06	0.12	0.015–>4	97.7
	Imipenem	0.25	0.5	0.06–>8	97.2
	Meropenem	0.03	0.12	0.015–>8	97.5
	Amikacin	8	32	0.5–>32	89.6
	Colistin (n=274)[d]	0.5	1	≤0.12–>4	97.1
	Tigecycline	0.25	1	0.06–8	95.4
	Levofloxacin	>4	>4	≤0.03–>4	3.5
Escherichia coli					
All (669)	Ceftazidime-avibactam	0.12	0.5	≤0.015–32	99.7
	Ceftazidime	16	128	0.03–>128	42.9
	Cefepime	16	>16	≤0.12–>16	40.8
	Aztreonam	32	128	≤0.015–>128	41.9
	Piperacillin-tazobactam	4	64	≤0.25–>128	82.5
	Doripenem	0.03	0.06	≤0.008–>4	99.6
	Imipenem	0.25	0.25	0.06–8	99.3
	Meropenem	0.03	0.06	0.008–>8	99.4
	Amikacin	4	16	0.5–>32	94.6
	Colistin (n=411)[d]	0.5	1	≤0.12–>4	99.8
	Tigecycline	0.25	0.5	0.06–4	99.7
	Levofloxacin	>4	>4	≤0.03–>4	28.4
All, MBL-negative (667)	Ceftazidime-avibactam	0.12	0.5	≤0.015–4	100
	Ceftazidime	16	128	0.03–>128	43.0
	Cefepime	16	>16	≤0.12–>16	40.9
	Aztreonam	32	128	≤0.015–>128	42.0
	Piperacillin-tazobactam	4	64	≤0.25–>128	82.8
	Doripenem	0.03	0.06	≤0.008–2	99.9
	Imipenem	0.25	0.25	0.06–8	99.6
	Meropenem	0.03	0.06	0.008–2	99.7
	Amikacin	4	16	0.5–>32	94.8
	Colistin (n=409)[d]	0.5	1	0.12–>4	99.8
	Tigecycline	0.25	0.5	0.06–4	99.7
	Levofloxacin	>4	>4	0.008–>4	28.5
Ceftazidime non-susceptible (382)	Ceftazidime-avibactam	0.12	0.5	≤0.015–32	99.5
	Ceftazidime	32	128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	2.6
	Aztreonam	64	>128	2–>128	1.1
	Piperacillin-tazobactam	8	64	0.5–>128	76.2
	Doripenem	0.03	0.06	0.015–>4	99.2
	Imipenem	0.25	0.25	0.06–8	99.0
	Meropenem	0.03	0.06	0.015–>8	99.0
	Amikacin	8	16	1–>32	91.6
	Colistin (n=243)[d]	0.5	1	≤0.12–2	100
	Tigecycline	0.25	0.5	0.06–4	99.5
	Levofloxacin	>4	>4	≤0.03–>4	5.5
Ceftazidime non-susceptible, MBL-negative (380)	Ceftazidime-avibactam	0.12	0.5	≤0.015–4	100
	Ceftazidime	32	128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	2.6
	Aztreonam	64	>128	2–>128	1.1
	Piperacillin-tazobactam	8	64	0.5–>128	76.6
	Doripenem	0.03	0.06	0.015–2	99.7
	Imipenem	0.25	0.25	0.06–8	99.5
	Meropenem	0.03	0.06	0.015–2	99.5
	Amikacin	8	16	1–>32	91.8
	Colistin (n=241)[d]	0.5	1	0.12–2	100
	Tigecycline	0.25	0.5	0.06–4	99.5
	Levofloxacin	>4	>4	≤0.03–>4	5.5
Meropenem non-susceptible (4)	Ceftazidime-avibactam	—[b]	—	0.5–32	50.0

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Ceftazidime	—	—	128–>128	0
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	128–>128	0
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	1–>4	25.0
	Imipenem	—	—	0.25–8	50.0
	Meropenem	—	—	2–>8	0.0
	Amikacin	—	—	16–32	75.0
	Colistin (n=4)[d]	—	—	0.25–1	100
	Tigecycline	—	—	0.12–0.5	100
	Levofloxacin	—	—	>4–>4	0
Meropenem non-susceptible, MBL-negative (2)	Ceftazidime-avibactam	—[b]	—	0.5–2	100
	Ceftazidime	—	—	>128–>128	0
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	>128–>128	0
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	1–2	50.0
	Imipenem	—	—	0.25–1	100
	Meropenem	—	—	2–2	0
	Amikacin	—	—	16–16	100
	Colistin (n=2)[d]	—	—	0.25–0.5	100
	Tigecycline	—	—	0.12–0.25	100
	Levofloxacin	—	—	>4–>4	0
Colistin-resistant (1)[f]	Ceftazidime-avibactam	—[b]	—	0.12	100
	Ceftazidime	—	—	0.5	100
	Cefepime	—	—	≤0.12	100
	Aztreonam	—	—	0.25	100
	Piperacillin-tazobactam	—	—	4	100
	Doripenem	—	—	≤0.008	100
	Imipenem	—	—	0.12	100
	Meropenem	—	—	0.03	100
	Amikacin	—	—	2	100
	Colistin (n=1)[d]	—	—	>4	0
	Tigecycline	—	—	0.12	100
	Levofloxacin	—	—	1	100
Multidrug-resistant (348)	Ceftazidime-avibactam	0.25	0.5	≤0.015–32	99.4
	Ceftazidime	32	>128	0.25–>128	1.2
	Cefepime	>16	>16	0.5–>16	0.3
	Aztreonam	64	>128	0.12–>128	0.3
	Piperacillin-tazobactam	8	128	0.5–>128	74.7
	Doripenem	0.03	0.06	0.015–>4	99.1
	Imipenem	0.25	0.25	0.06–8	99.1
	Meropenem	0.03	0.06	0.015–>8	98.9
	Amikacin	8	16	1–>32	91.1
	Colistin (n=217)[d]	0.5	1	≤0.12–2	100
	Tigecycline	0.25	0.5	0.06–4	99.7
	Levofloxacin	>4	>4	≤0.03–>4	0.6
Multidrug-resistant, MBL-negative (346)	Ceftazidime-avibactam	0.12	0.5	≤0.015–4	100
	Ceftazidime	32	>128	0.25–>128	1.2
	Cefepime	>16	>16	0.5–>16	0.3
	Aztreonam	64	>128	0.12–>128	0.3
	Piperacillin-tazobactam	8	64	0.5–>128	75.1
	Doripenem	0.03	0.06	0.015–2	99.7
	Imipenem	0.25	0.25	0.06–2	99.7
	Meropenem	0.03	0.06	0.015–2	99.4
	Amikacin	8	16	1–>32	91.3
	Colistin (n=215)[d]	0.5	1	0.12–2	100
	Tigecycline	0.25	0.5	0.06–4	99.7
	Levofloxacin	>4	>4	≤0.03–>4	0.6

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Klebsiella pneumoniae					
All (510)	Ceftazidime-avibactam	0.12	0.5	≤0.015–>128	99.2
	Ceftazidime	0.25	64	0.03–>128	57.5
	Cefepime	≤0.12	>16	≤0.12–>16	59.2
	Aztreonam	0.12	64	≤0.015–>128	58.0
	Piperacillin-tazobactam	4	64	≤0.25–>128	81.4
	Doripenem	0.06	0.12	0.03–>4	98.6
	Imipenem	0.25	0.5	0.06–>8	98.6
	Meropenem	0.03	0.06	0.015–>8	98.6
	Amikacin	2	8	0.5–>32	97.5
	Colistin (n=344)[d]	1	1	0.25–>4	97.4
	Tigecycline	0.5	2	0.06–8	95.5
	Levofloxacin	0.25	>4	≤0.03–>4	83.3
All, MBL-negative (506)	Ceftazidime-avibactam	0.12	0.5	≤0.015–8	100
	Ceftazidime	0.25	64	0.03–>128	57.9
	Cefepime	≤0.12	>16	≤0.12–>16	59.7
	Aztreonam	0.12	64	≤0.015–>128	57.9
	Piperacillin-tazobactam	4	64	≤0.25–>128	82.0
	Doripenem	0.06	0.12	0.03–>4	99.4
	Imipenem	0.25	0.5	0.06–>8	99.4
	Meropenem	0.03	0.06	0.015–>8	99.4
	Amikacin	2	4	0.5–>32	98.2
	Colistin (n=340)[d]	1	1	0.25–>4	98.5
	Tigecycline	0.5	2	0.06–8	95.7
	Levofloxacin	0.25	>4	≤0.03–>4	83.6
Ceftazidime non-susceptible (217)	Ceftazidime-avibactam	0.25	0.5	≤0.015–>128	98.2
	Ceftazidime	32	128	8–>128	0
	Cefepime	16	>16	≤0.12–>16	6.0
	Aztreonam	64	128	0.25–>128	2.8
	Piperacillin-tazobactam	16	>128	0.5–>128	61.3
	Doripenem	0.06	0.12	0.03–>4	96.8
	Imipenem	0.25	0.5	0.12–>8	97.2
	Meropenem	0.06	0.12	0.03–>8	96.8
	Amikacin	4	8	0.5–>32	94.0
	Colistin (n=143)[d]	1	2	0.25–>4	94.4
	Tigecycline	1	2	0.12–8	91.2
	Levofloxacin	1	>4	≤0.03–>4	66.8
Ceftazidime non-susceptible (213)	Ceftazidime-avibactam	0.25	0.5	≤0.015–8	100
	Ceftazidime	32	128	8–>128	0
	Cefepime	16	>16	≤0.12–>16	6.1
	Aztreonam	64	128	2–>128	1.4
	Piperacillin-tazobactam	16	128	0.5–>128	62.4
	Doripenem	0.06	0.12	0.03–>4	98.6
	Imipenem	0.25	0.5	0.12–>8	99.1
	Meropenem	0.06	0.12	0.03–>8	98.6
	Amikacin	4	8	0.5–>32	95.8
	Colistin (n=139)[d]	1	1	0.25–>4	97.1
	Tigecycline	1	2	0.12–8	91.6
	Levofloxacin	1	>4	≤0.03–>4	67.1
Meropenem non-susceptible (7)	Ceftazidime-avibactam	—[b]	—	0.25–>128	42.9
	Ceftazidime	—	—	64–>128	0
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	0.25–>128	42.9
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	2–>4	0
	Imipenem	—	—	1–>8	14.3
	Meropenem	—	—	4–>8	0
	Amikacin	—	—	4–>32	42.9
	Colistin (n=6)[d]	—	—	1–>4	16.7
	Tigecycline	—	—	0.25–4	71.4

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Levofloxacin	—	—	0.5–>4	28.6
Meropenem non-susceptible, MBL-negative (3)	Ceftazidime-avibactam	1	8	0.25–8	100
	Ceftazidime	>128	>128	128–>128	0
	Cefepime	>16	>16	>16–>16	0
	Aztreonam	128	>128	128–>128	0
	Piperacillin-tazobactam	>128	>128	128–>128	0
	Doripenem	4	>4	2–>4	0
	Imipenem	2	>8	1–>8	33.3
	Meropenem	8	>8	4–>8	0
	Amikacin	8	16	4–16	100
	Colistin (n=2)[d]	1	>4	1–>4	50.0
	Tigecycline	0.5	4	0.25–4	66.7
	Levofloxacin	>4	>4	>4–>4	0
Colistin-resistant (9)	Ceftazidime-avibactam	—[b]	—	0.03–>128	55.6
	Ceftazidime	—	—	0.25–>128	11.1
	Cefepime	—	—	≤0.12–>16	33.3
	Aztreonam	—	—	0.06–>128	44.4
	Piperacillin-tazobactam	—	—	2–>128	33.3
	Doripenem	—	—	0.03–>4	44.4
	Imipenem	—	—	0.12–>8	44.4
	Meropenem	—	—	0.03–>8	44.4
	Amikacin	—	—	2–>32	33.3
	Colistin (n=9)[d]	—	—	4–>4	0
	Tigecycline	—	—	0.25–4	88.9
	Levofloxacin	—	—	0.5–>4	44.4
Colistin-resistant, MBL-negative (5)	Ceftazidime-avibactam	0.25	1	0.03–1	100
	Ceftazidime	64	>128	0.25–>128	20.0
	Cefepime	2	>16	≤0.12–>16	60.0
	Aztreonam	128	128	0.06–128	20.0
	Piperacillin-tazobactam	8	>128	2–>128	60.0
	Doripenem	0.06	4	0.03–4	80.0
	Imipenem	0.5	2	0.12–2	80.0
	Meropenem	0.06	4	0.03–4	80.0
	Amikacin	4	>32	2–>32	60.0
	Colistin (n=5)[d]	4	>4	4–>4	0
	Tigecycline	1	2	0.25–2	100
	Levofloxacin	>4	>4	2–>4	40.0
Multidrug-resistant (63)	Ceftazidime-avibactam	0.5	2	0.03–>128	93.7
	Ceftazidime	64	>128	16–>128	0
	Cefepime	>16	>16	1–>16	3.2
	Aztreonam	128	>128	0.25–>128	4.8
	Piperacillin-tazobactam	128	>128	4–>128	22.2
	Doripenem	0.06	2	0.03–>4	88.9
	Imipenem	0.25	1	0.12–>8	90.5
	Meropenem	0.06	4	0.03–>8	88.9
	Amikacin	4	32	0.5–>32	84.1
	Colistin (n=41)[d]	1	>4	0.25–>4	80.5
	Tigecycline	1	4	0.25–8	76.2
	Levofloxacin	>4	>4	0.06–>4	14.3
Multidrug-resistant, MBL-negative (59)	Ceftazidime-avibactam	0.5	1	0.03–8	100
	Ceftazidime	64	>128	16–>128	0
	Cefepime	>16	>16	1–>16	3.4
	Aztreonam	128	>128	16–>128	0
	Piperacillin-tazobactam	64	>128	4–>128	23.7
	Doripenem	0.06	0.25	0.03–>4	94.9
	Imipenem	0.25	0.5	0.12–>8	96.6
	Meropenem	0.06	0.25	0.03–>8	94.9
	Amikacin	4	32	0.5–>32	89.8
	Colistin (n=37)[d]	1	4	0.25–>4	89.2

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Tigecycline	1	4	0.25–8	76.3
	Levofloxacin	>4	>4	0.06–>4	11.9
Klebsiella oxytoca[g,h]					
All (98)[f]	Ceftazidime-avibactam	0.12	0.25	≤0.015–1	100
	Ceftazidime	0.12	8	0.03–>128	87.8
	Cefepime	≤0.12	4	≤0.12–>16	89.8
	Aztreonam	0.12	32	≤0.015–>128	85.7
	Piperacillin-tazobactam	2	8	0.5–>128	94.9
	Doripenem	0.06	0.06	0.03–0.25	100
	Imipenem	0.25	0.5	0.06–1	100
	Meropenem	0.03	0.06	0.03–0.25	100
	Amikacin	2	4	0.5–>32	99.0
	Colistin (n=62)[d]	1	1	0.25–2	100
	Tigecycline	0.25	1	0.06–2	100
	Levofloxacin	0.06	4	≤0.03–>4	88.8
Ceftazidime non-susceptible (12)[f]	Ceftazidime-avibactam	0.12	0.5	0.03–1	100
	Ceftazidime	16	128	8–>128	0
	Cefepime	4	>16	≤0.12–>16	33.3
	Aztreonam	32	128	16–>128	0
	Piperacillin-tazobactam	8	128	4–>128	66.7
	Doripenem	0.06	0.06	0.03–0.25	100
	Imipenem	0.25	0.25	0.12–1	100
	Meropenem	0.06	0.12	0.03–0.25	100
	Amikacin	8	16	2–>32	91.7
	Colistin (n=10)[d]	0.5	2	0.5–2	100
	Tigecycline	0.5	1	0.25–2	100
	Levofloxacin	>4	>4	0.06–>4	33.3
Multidrug-resistant (3)[f]	Ceftazidime-avibactam	—[b]	—	0.03–1	100
	Ceftazidime	—	—	32–>128	0
	Cefepime	—	—	2–>16	33.3
	Aztreonam	—	—	64–>128	0
	Piperacillin-tazobactam	—	—	8–128	33.3
	Doripenem	—	—	0.03–0.06	100
	Imipenem	—	—	0.12–0.25	100
	Meropenem	—	—	0.03–0.06	100
	Amikacin	—	—	8–>32	66.7
	Colistin (n=3)[d]	—	—	0.5–2	100
	Tigecycline	—	—	1–1	100
	Levofloxacin	—	—	>4–>4	0
Enterobacter spp.					
All (225)[i]	Ceftazidime-avibactam	0.25	0.5	0.03–128	98.7
	Ceftazidime	0.5	128	0.03–>128	69.3
	Cefepime	≤0.12	4	≤0.12–>16	84.4
	Aztreonam	0.12	64	≤0.015–>128	71.1
	Piperacillin-tazobactam	4	128	0.5–>128	80.0
	Doripenem	0.06	0.25	0.015–>4	96.0
	Imipenem	0.5	2	0.12–8	84.4
	Meropenem	0.06	0.12	0.015–8	96.4
	Amikacin	2	4	≤0.25–>32	96.9
	Colistin (n=138)[d]	0.5	4	≤0.12–>4	89.1
	Tigecycline	0.5	1	0.06–4	98.2
	Levofloxacin	0.06	2	≤0.03–>4	90.2
All, MBL-negative (221)	Ceftazidime-avibactam	0.25	0.5	0.03–4	100
	Ceftazidime	0.5	128	0.03–>128	70.1
	Cefepime	≤0.12	4	≤0.12–>16	85.5
	Aztreonam	0.12	64	≤0.015–>128	70.6
	Piperacillin-tazobactam	4	128	0.5–>128	81.0
	Doripenem	0.06	0.25	0.015–>4	97.7
	Imipenem	0.5	2	0.12–8	86.0

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Meropenem	0.06	0.12	0.015–8	97.7
	Amikacin	2	4	≤0.25–>32	97.3
	Colistin (n=135)[d]	0.5	4	≤0.12–>4	88.9
	Tigecycline	0.5	1	0.06–4	98.2
	Levofloxacin	0.06	2	≤0.03–>4	90.0
Ceftazidime non-susceptible (69)	Ceftazidime-avibactam	0.5	2	0.03–128	95.7
	Ceftazidime	64	>128	8–>128	0
	Cefepime	2	>16	≤0.12–>16	52.2
	Aztreonam	64	>128	0.06–>128	7.3
	Piperacillin-tazobactam	64	>128	2–>128	36.2
	Doripenem	0.12	4	0.015–>4	88.4
	Imipenem	0.5	4	0.12–8	87.0
	Meropenem	0.12	2	0.015–8	88.4
	Amikacin	2	32	≤0.25–>32	89.9
	Colistin (n=39)[d]	0.5	1	0.25–>4	97.4
	Tigecycline	0.5	2	0.25–4	94.2
	Levofloxacin	0.25	>4	≤0.03–>4	75.4
Ceftazidime non-susceptible, MBL-negative (66)	Ceftazidime-avibactam	0.5	1	0.03–4	100
	Ceftazidime	64	>128	8–>128	0
	Cefepime	2	>16	≤0.12–>16	53.0
	Aztreonam	64	>128	2–>128	3.0
	Piperacillin-tazobactam	32	>128	2–>128	37.9
	Doripenem	0.12	0.25	0.015–>4	92.4
	Imipenem	0.5	1	0.12–8	90.9
	Meropenem	0.06	0.5	0.015–8	92.4
	Amikacin	2	16	≤0.25–>32	90.9
	Colistin (n=36)[d]	0.5	1	0.25–>4	97.2
	Tigecycline	0.5	2	0.25–4	93.9
	Levofloxacin	0.12	>4	≤0.03–>4	74.2
Meropenem non-susceptible (8)	Ceftazidime-avibactam	—[b]	—	0.5–128	62.5
	Ceftazidime	—	—	8–>128	0
	Cefepime	—	—	1–>16	25.0
	Aztreonam	—	—	0.06–>128	37.5
	Piperacillin-tazobactam	—	—	16–>128	12.5
	Doripenem	—	—	2–>4	0
	Imipenem	—	—	4–8	0
	Meropenem	—	—	2–8	0
	Amikacin	—	—	1–32	87.5
	Colistin (n=7)[d]	—	—	0.5–1	100
	Tigecycline	—	—	0.5–4	87.5
	Levofloxacin	—	—	0.12–>4	75.0
Meropenem non-susceptible (5)	Ceftazidime-avibactam	—[b]	—	0.5–2	100
	Ceftazidime	—	—	8–>128	0
	Cefepime	—	—	1–>16	20.0
	Aztreonam	—	—	8–>128	0
	Piperacillin-tazobactam	—	—	16–>128	20.0
	Doripenem	—	—	2–>4	0
	Imipenem	—	—	4–8	0
	Meropenem	—	—	2–8	0
	Amikacin	—	—	1–8	100
	Colistin (n=4)[d]	—	—	0.5–1	100
	Tigecycline	—	—	0.5–4	80.0
	Levofloxacin	—	—	0.12–>4	60.0
Colistin-resistant (15)[f]	Ceftazidime-avibactam	0.12	0.25	0.06–0.5	100
	Ceftazidime	0.25	0.5	0.12–8	93.3
	Cefepime	≤0.12	≤0.12	≤0.12–0.25	100
	Aztreonam	0.12	0.5	0.06–2	100
	Piperacillin-tazobactam	2	4	0.5–8	100
	Doripenem	0.06	0.12	0.03–0.25	100

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Imipenem	1	2	0.5–2	80.0
	Meropenem	0.06	0.12	0.03–0.12	100
	Amikacin	2	2	1–4	100
	Colistin (n=15)[d]	>4	>4	4–>4	0
	Tigecycline	0.5	1	0.5–1	100
	Levofloxacin	0.12	0.12	0.06–0.25	100
Multidrug-resistant (14)	Ceftazidime-avibactam	1	2	0.25–128	92.9
	Ceftazidime	128	>128	32–>128	0
	Cefepime	>16	>16	0.25–>16	7.1
	Aztreonam	128	>128	0.12–>128	7.1
	Piperacillin-tazobactam	128	>128	8–>128	28.6
	Doripenem	0.25	4	0.03–>4	64.3
	Imipenem	1	4	0.25–8	64.3
	Meropenem	0.12	8	0.015–8	64.3
	Amikacin	4	>32	2–>32	71.4
	Colistin (n=8)[d]	—[b]	—	0.25–1	100
	Tigecycline	1	4	0.25–4	78.6
	Levofloxacin	4	>4	0.5–>4	28.6
Multidrug-resistant, MBL-negative (13)	Ceftazidime-avibactam	1	2	0.25–2	100
	Ceftazidime	128	>128	32–>128	0
	Cefepime	>16	>16	0.25–>16	7.7
	Aztreonam	128	>128	32–>128	0
	Piperacillin-tazobactam	>128	>128	8–>128	30.8
	Doripenem	0.25	4	0.03–>4	69.2
	Imipenem	1	4	0.25–8	69.2
	Meropenem	0.12	8	0.015–8	69.2
	Amikacin	4	>32	2–>32	76.9
	Colistin (n=7)[d]	—[b]	—	0.25–1	100
	Tigecycline	2	4	0.25–4	76.9
	Levofloxacin	>4	>4	1–>4	23.1
Citrobacter spp.[h]					
All (84)[j]	Ceftazidime-avibactam	0.12	0.5	≤0.015–128	97.6
	Ceftazidime	0.5	128	0.06–>128	73.8
	Cefepime	≤0.12	4	≤0.12–>16	89.3
	Aztreonam	0.12	64	≤0.015–>128	76.2
	Piperacillin-tazobactam	4	64	0.5–>128	84.5
	Doripenem	0.06	0.06	0.015–>4	98.8
	Imipenem	0.5	1	0.06–4	92.9
	Meropenem	0.03	0.06	0.015–8	98.8
	Amikacin	2	4	0.5–>32	94.1
	Colistin (n=58)[d]	0.5	1	≤0.12–2	100
	Tigecycline	0.25	0.5	0.06–2	100
	Levofloxacin	0.06	2	≤0.03–>4	91.7
All, MBL-negative (83)	Ceftazidime-avibactam	0.12	0.25	≤0.015–128	98.8
	Ceftazidime	0.5	128	0.06–>128	74.7
	Cefepime	≤0.12	2	≤0.12–>16	90.4
	Aztreonam	0.12	64	≤0.015–>128	77.1
	Piperacillin-tazobactam	4	32	0.5–128	85.5
	Doripenem	0.06	0.06	0.015–1	100
	Imipenem	0.5	1	0.06–4	94.0
	Meropenem	0.03	0.06	0.015–0.5	100
	Amikacin	2	4	0.5–>32	94.0
	Colistin (n=57)[d]	0.5	1	0.12–2	100
	Tigecycline	0.25	0.5	0.06–1	100
	Levofloxacin	0.06	2	≤0.03–>4	92.8
Ceftazidime non-susceptible (22)	Ceftazidime-avibactam	0.25	4	0.12–128	90.9
	Ceftazidime	128	>128	8–>128	0
	Cefepime	2	>16	0.25–>16	59.1
	Aztreonam	32	128	0.06–>128	9.1

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Piperacillin-tazobactam	32	64	4–>128	40.9
	Doripenem	0.06	0.25	0.03–>4	95.5
	Imipenem	0.5	2	0.12–4	86.4
	Meropenem	0.03	0.25	0.015–8	95.5
	Amikacin	2	>32	0.5–>32	77.3
	Colistin (n=13)[d]	1	1	0.25–2	100
	Tigecycline	0.25	1	0.12–2	100
	Levofloxacin	0.5	>4	0.06–>4	72.7
Ceftazidime non-susceptible, MBL-negative (21)	Ceftazidime-avibactam	0.25	0.5	0.12–128	95.2
	Ceftazidime	128	>128	8–>128	0
	Cefepime	2	>16	0.25–>16	61.9
	Aztreonam	32	128	0.06–>128	9.5
	Piperacillin-tazobactam	32	64	4–128	42.9
	Doripenem	0.06	0.25	0.03–1	100
	Imipenem	0.5	1	0.12–4	90.5
	Meropenem	0.03	0.12	0.015–0.5	100
	Amikacin	2	>32	0.5–>32	76.2
	Colistin (n=12)[d]	0.5	1	0.25–2	100
	Tigecycline	0.25	0.5	0.12–1	100
	Levofloxacin	0.5	>4	0.06–>4	76.2
Meropenem non-susceptible (1)[f]	Ceftazidime-avibactam	—[b]	—	64	0
	Ceftazidime	—	—	>128	0
	Cefepime	—	—	16	0
	Aztreonam	—	—	128	0
	Piperacillin-tazobactam	—	—	>128	0
	Doripenem	—	—	>4	0
	Imipenem	—	—	4	0
	Meropenem	—	—	8	0
	Amikacin	—	—	8	100
	Colistin (n=1)[d]	—	—	1	100
	Tigecycline	—	—	2	100
	Levofloxacin	—	—	>4	0
Multidrug-resistant (2)	Ceftazidime-avibactam	—[b]	—	0.12–64	50.0
	Ceftazidime	—	—	64–>128	0
	Cefepime	—	—	16–16	0
	Aztreonam	—	—	32–128	0
	Piperacillin-tazobactam	—	—	32–>128	0
	Doripenem	—	—	0.06–>4	50.0
	Imipenem	—	—	0.5–4	50.0
	Meropenem	—	—	0.03–8	50.0
	Amikacin	—	—	2–8	100
	Colistin (n=2)[d]	—	—	0.5–1	100
	Tigecycline	—	—	0.25–2	100
	Levofloxacin	—	—	>4–>4	0
Multidrug-resistant, MBL-negative (1)	Ceftazidime-avibactam	0.12	0.12	0.12	100
	Ceftazidime	64	64	64	0
	Cefepime	16	16	16	0
	Aztreonam	32	32	32	0
	Piperacillin-tazobactam	32	32	32	0
	Doripenem	0.06	0.06	0.06	100
	Imipenem	0.5	0.5	0.5	100
	Meropenem	0.03	0.03	0.03	100
	Amikacin	2	2	2	100
	Colistin (n=1)[d]	0.5	0.5	0.5	100
	Tigecycline	0.25	0.25	0.25	100
	Levofloxacin	>4	>4	>4	0
Proteeae[g]					
All (214)[f,k]	Ceftazidime-avibactam	0.03	0.12	≤0.015–2	100
	Ceftazidime	0.06	0.5	0.03–>128	97.2

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Cefepime	≤0.12	0.25	≤0.12–>16	96.7
	Aztreonam	≤0.015	0.12	≤0.015–128	98.6
	Piperacillin-tazobactam	≤0.25	1	≤0.25–32	99.1
	Doripenem	0.25	0.5	0.03–2	98.6
	Imipenem	2	4	0.06–8	23.8
	Meropenem	0.06	0.25	0.03–1	100
	Amikacin	4	8	0.5–>32	98.6
	Colistin (n=125)[d]	>4	>4	2–>4	0.8
	Tigecycline	2	4	0.12–8	53.3
	Levofloxacin	0.25	>4	≤0.03–>4	80.8
Ceftazidime-non-susceptible (6)[f]	Ceftazidime-avibactam	—[b]	—	0.06–2	100
	Ceftazidime	—	—	8–>128	0
	Cefepime	—	—	≤0.12–>16	50.0
	Aztreonam	—	—	0.25–128	50.0
	Piperacillin-tazobactam	—	—	≤0.25–32	83.3
	Doripenem	—	—	0.12–1	100
	Imipenem	—	—	0.5–4	16.7
	Meropenem	—	—	0.06–0.25	100
	Amikacin	—	—	2–>32	50.0
	Colistin (n=3)[d]	—	—	>4–>4	0
	Tigecycline	—	—	0.12–4	66.7
	Levofloxacin	—	—	0.06–>4	50.0
Multidrug-resistant (3)[f]	Ceftazidime-avibactam	—[b]	—	0.06–2	100
	Ceftazidime	—	—	2–>128	33.3
	Cefepime	—	—	4–>16	0
	Aztreonam	—	—	4–128	33.3
	Piperacillin-tazobactam	—	—	2–32	66.7
	Doripenem	—	—	0.25–1	100
	Imipenem	—	—	2–4	0
	Meropenem	—	—	0.12–0.25	100
	Amikacin	—	—	8–>32	33.3
	Colistin (n=2)[d]	—	—	>4–>4	0
	Tigecycline	—	—	2–8	33.3
	Levofloxacin	—	—	4–>4	0
Other *Enterobacteriaceae*[h]					
All (62)[f,l]	Ceftazidime-avibactam	0.25	0.5	0.06–1	100
	Ceftazidime	0.25	32	0.06–>128	82.3
	Cefepime	≤0.12	16	≤0.12–>16	82.3
	Aztreonam	0.12	64	0.03–>128	82.3
	Piperacillin-tazobactam	2	16	0.5–>128	95.2
	Doripenem	0.12	0.25	0.06–>4	96.8
	Imipenem	0.5	1	0.12–>8	91.9
	Meropenem	0.06	0.12	0.03–>8	96.8
	Amikacin	2	16	≤0.25–>32	90.3
	Colistin (n=43)[d]	>4	>4	0.25–>4	46.5
	Tigecycline	1	2	0.12–4	98.4
	Levofloxacin	0.25	>4	≤0.03–>4	88.7
Ceftazidime-non-susceptible (11)[f]	Ceftazidime-avibactam	0.5	0.5	0.25–1	100
	Ceftazidime	32	64	8–>128	0
	Cefepime	16	>16	4–>16	0
	Aztreonam	64	>128	16–>128	0
	Piperacillin-tazobactam	16	>128	2–>128	81.8
	Doripenem	0.06	>4	0.06–>4	81.8
	Imipenem	0.25	>8	0.12–>8	81.8
	Meropenem	0.06	>8	0.06–>8	81.8
	Amikacin	4	>32	2–>32	72.7
	Colistin (n=10)[d]	1	>4	0.25–>4	80.0
	Tigecycline	0.5	1	0.25–2	100
	Levofloxacin	>4	>4	0.12–>4	36.4

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Meropenem-non-susceptible (2)[f]	Ceftazidime-avibactam	—[b]	—	0.5–1	100
	Ceftazidime	—	—	64–>128	0
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	>128–>128	0
	Piperacillin-tazobactam	—	—	>128–>128	0
	Doripenem	—	—	>4–>4	0
	Imipenem	—	—	>8–>8	0
	Meropenem	—	—	>8–>8	0
	Amikacin	—	—	32–>32	0
	Colistin (n=2)[d]	—	—	2–>4	50.0
	Tigecycline	—	—	0.5–1	100
	Levofloxacin	—	—	1–2	100
Multidrug-resistant (9)[f]	Ceftazidime-avibactam	—[b]	—	0.25–1	100
	Ceftazidime	—	—	8–>128	0
	Cefepime	—	—	4–>16	0
	Aztreonam	—	—	16–>128	0
	Piperacillin-tazobactam	—	—	2–>128	77.8
	Doripenem	—	—	0.06–>4	77.8
	Imipenem	—	—	0.12–>8	77.8
	Meropenem	—	—	0.06–>8	77.8
	Amikacin	—	—	4–>32	66.7
	Colistin (n=9)[d]	—	—	0.5–>4	77.8
	Tigecycline	—	—	0.25–1	100
	Levofloxacin	—	—	0.12–>4	33.3
Pseudomonas aeruginosa					
All (457)	Ceftazidime-avibactam	2	16	0.25–>128	88.2
	Ceftazidime	4	>128	0.5–>128	75.1
	Cefepime	4	>16	0.25–>16	79.7
	Aztreonam	8	64	1–>128	63.9
	Piperacillin-tazobactam	8	128	0.5–>128	72.4
	Doripenem	1	>4	≤0.015–>4	66.7
	Imipenem	2	>8	0.12–>8	59.1
	Meropenem	1	>8	≤0.06–>8	65.4
	Amikacin	4	>32	0.5–>32	82.5
	Colistin (n=344)[d]	2	2	0.5–8	93.6
	Levofloxacin	1	>4	≤0.03–>4	69.2
All, MBL-negative (448)	Ceftazidime-avibactam	2	16	0.25–>128	89.7
	Ceftazidime	4	128	0.5–>128	76.3
	Cefepime	4	>16	0.25–>16	81.0
	Aztreonam	8	64	1–>128	64.1
	Piperacillin-tazobactam	8	128	0.5–>128	73.0
	Doripenem	1	>4	≤0.015–>4	68.1
	Imipenem	2	>8	0.12–>8	60.3
	Meropenem	1	>8	≤0.06–>8	66.7
	Amikacin	4	>32	0.5–>32	83.0
	Colistin (n=337)[d]	2	2	0.5–8	93.5
	Levofloxacin	1	>4	≤0.03–>4	70.3
Ceftazidime-non-susceptible (114)	Ceftazidime-avibactam	8	>128	0.5–>128	52.6
	Ceftazidime	128	>128	16–>128	0
	Cefepime	>16	>16	0.25–>16	20.2
	Aztreonam	32	>128	4–>128	13.2
	Piperacillin-tazobactam	128	>128	4–>128	9.7
	Doripenem	>4	>4	0.12–>4	23.7
	Imipenem	>8	>8	1–>8	22.8
	Meropenem	>8	>8	≤0.06–>8	23.7
	Amikacin	16	>32	0.5–>32	51.8
	Colistin (n=94)[d]	2	2	0.5–4	93.6
	Levofloxacin	>4	>4	0.25–>4	32.5
Ceftazidime-non-susceptible, MBL-negative (106)	Ceftazidime-avibactam	8	64	0.5–>128	56.6

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Ceftazidime	128	>128	16–>128	0
	Cefepime	>16	>16	0.25–>16	21.7
	Aztreonam	32	>128	4–>128	9.4
	Piperacillin-tazobactam	128	>128	8–>128	6.6
	Doripenem	>4	>4	0.12–>4	25.5
	Imipenem	>8	>8	1–>8	24.5
	Meropenem	>8	>8	≤0.06–>8	25.5
	Amikacin	16	>32	0.5–>32	51.9
	Colistin (n=88)[d]	2	2	0.5–4	93.2
	Levofloxacin	>4	>4	0.25–>4	34.9
Meropenem non-susceptible (158)	Ceftazidime-avibactam	8	64	0.5–>128	67.7
	Ceftazidime	16	>128	1–>128	44.9
	Cefepime	16	>16	0.25–>16	49.4
	Aztreonam	16	>128	1–>128	31.7
	Piperacillin-tazobactam	64	>128	2–>128	39.9
	Doripenem	>4	>4	1–>4	6.3
	Imipenem	>8	>8	2–>8	5.7
	Meropenem	>8	>8	4–>8	0
	Amikacin	8	>32	1–>32	59.5
	Colistin (n=132)[d]	2	2	0.5–4	93.2
	Levofloxacin	>4	>4	0.25–>4	38.0
Meropenem non-susceptible, MBL-negative (149)	Ceftazidime-avibactam	4	64	0.5–>128	71.1
	Ceftazidime	16	>128	1–>128	47.0
	Cefepime	8	>16	0.25–>16	51.7
	Aztreonam	16	>128	1–>128	30.2
	Piperacillin-tazobactam	64	>128	2–>128	39.6
	Doripenem	>4	>4	1–>4	6.7
	Imipenem	>8	>8	2–>8	6.0
	Meropenem	>8	>8	4–>8	0
	Amikacin	8	>32	1–>32	59.7
	Colistin (n=125)[d]	2	2	0.5–4	92.8
	Levofloxacin	>4	>4	0.25–>4	39.6
Colistin-resistant (1)[f]	Ceftazidime-avibactam	—[b]	—	2	100
	Ceftazidime	—	—	2	100
	Cefepime	—	—	2	100
	Aztreonam	—	—	8	100
	Piperacillin-tazobactam	—	—	4	100
	Doripenem	—	—	0.5	100
	Imipenem	—	—	1	100
	Meropenem	—	—	0.25	100
	Amikacin	—	—	4	100
	Colistin (n=1)[d]	—	—	8	0
	Levofloxacin	—	—	0.5	100
Multidrug-resistant (93)	Ceftazidime-avibactam	16	>128	1–>128	45.2
	Ceftazidime	128	>128	2–>128	12.9
	Cefepime	>16	>16	0.25–>16	16.1
	Aztreonam	64	>128	4–>128	12.9
	Piperacillin-tazobactam	128	>128	4–>128	15.1
	Doripenem	>4	>4	0.12–>4	6.5
	Imipenem	>8	>8	2–>8	9.7
	Meropenem	>8	>8	≤0.06–>8	6.5
	Amikacin	>32	>32	1–>32	36.6
	Colistin (n=77)[d]	2	2	0.5–4	93.5
	Levofloxacin	>4	>4	0.5–>4	14.0
Multidrug-resistant, MBL-negative (88)	Ceftazidime-avibactam	16	64	1–>128	47.7
	Ceftazidime	128	>128	2–>128	13.6
	Cefepime	>16	>16	0.25–>16	17.1
	Aztreonam	64	>128	4–>128	10.2
	Piperacillin-tazobactam	128	>128	4–>128	13.6

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Doripenem	>4	>4	0.12–>4	6.8
	Imipenem	>8	>8	2–>8	10.2
	Meropenem	>8	>8	≤0.06–>8	6.8
	Amikacin	>32	>32	1–>32	37.5
	Colistin (n=74)[d]	2	2	0.5–4	93.2
	Levofloxacin	>4	>4	0.5–>4	14.8

[a] MBL-negative, no gene encoding a metallo-β-lactamase was detected by polymerase chain reaction assay.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only.

[e] Excluded isolates of Proteeae and *Serratia* spp., which are intrinsically resistant to colistin.

[f] All isolates were MBL-negative.

[g] No meropenem non-susceptible isolates were collected.

[h] No colistin-resistant isolates were collected.

[i] *Enterobacter* spp. included *Enterobacter aerogenes* (n=64), *Enterobacter asburiae* (n=18), *Enterobacter cloacae* (n=141), and *Enterobacter kobei* (n=2).

[j] *Citrobacter* spp. included *Citrobacter braakii* (n=3), *Citrobacter freundii* (n=62), and *Citrobacter koseri* (n=19).

[k] Proteeae included *Morganella morganii* (n=45), *Proteus mirabilis* (n=115), *Proteus penneri* (n=2), *Proteus vulgaris* (n=38), *Providencia rettgeri* (n=10), and *Providencia stuartii* (n=4).

[l] Other *Enterobacteriaceae* included *Pantoea agglomerans* (n=1), *Pluralibacter gergoviae* (n=2), *Raoultella ornithinolytica* (n=20), *Raoultella planticola* (n=1), *Serratia marcescens* (n=37), and *Serratia ureilytica* (n=1).

Table S6B. Mexico - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 855 isolates of β-lactamase-positive *Enterobacteriaceae* (n=674) and *P. aeruginosa* (n=181) collected as part of the INFORM global surveillance program in 2012–2015.

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae (674)					
OSBL-positive (7)	Ceftazidime-avibactam	—[b]	—	0.06–0.5	100
	Ceftazidime	—	—	0.06–>128	42.9
	Cefepime	—	—	≤0.12–>16	57.1
	Aztreonam	—	—	≤0.015–128	42.9
	Piperacillin-tazobactam	—	—	≤0.25–>128	57.1
	Doripenem	—	—	0.03–0.5	100
	Imipenem	—	—	0.12–8	71.4
	Meropenem	—	—	0.03–0.12	100
	Amikacin	—	—	1–>32	71.4
	Colistin (n=4)[d]	—	—	1–>4	75.0
	Tigecycline	—	—	0.25–2	100
	Levofloxacin	—	—	≤0.03–>4	57.1
ESBL-positive (591)[e]	Ceftazidime-avibactam	0.25	0.5	≤0.015–4	100
	Ceftazidime	32	128	0.5–>128	4.4
	Cefepime	>16	>16	0.5–>16	2.7
	Aztreonam	64	128	2–>128	2.7
	Piperacillin-tazobactam	16	64	0.5–>128	72.8
	Doripenem	0.06	0.12	0.015–4	99.5
	Imipenem	0.25	0.5	0.06–8	99.7
	Meropenem	0.03	0.06	0.015–8	99.3
	Amikacin	4	16	0.5–>32	94.2
	Colistin (n=376)[d]	0.5	1	≤0.12–>4	99.2
	Tigecycline	0.5	2	0.06–8	96.8
	Levofloxacin	>4	>4	≤0.03–>4	27.7
AmpC-positive (39)[f]	Ceftazidime-avibactam	0.25	1	0.03–4	100
	Ceftazidime	16	>128	0.03–>128	38.5
	Cefepime	≤0.12	4	≤0.12–>16	79.5
	Aztreonam	8	64	≤0.015–128	48.7
	Piperacillin-tazobactam	8	>128	0.5–>128	69.2
	Doripenem	0.06	0.5	0.03–4	94.9
	Imipenem	1	8	0.12–>8	53.8
	Meropenem	0.06	0.25	0.015–8	94.9
	Amikacin	2	8	≤0.25–>32	94.9
	Colistin (n=18)[d]	1	>4	0.25–>4	88.9
	Tigecycline	0.5	2	0.12–4	97.4
	Levofloxacin	0.12	>4	≤0.03–>4	76.9
ESBL-positive + AmpC-positive (22)[g]	Ceftazidime-avibactam	0.5	2	0.03–2	100
	Ceftazidime	64	>128	0.12–>128	4.5
	Cefepime	>16	>16	≤0.12–>16	18.2
	Aztreonam	128	>128	0.25–>128	9.1
	Piperacillin-tazobactam	32	>128	2–>128	40.9
	Doripenem	0.06	4	0.03–>4	81.8
	Imipenem	0.25	4	0.12–>8	77.3
	Meropenem	0.06	4	0.03–>8	81.8
	Amikacin	4	32	0.5–>32	72.7
	Colistin (n=15)[d]	0.5	4	0.25–>4	86.7
	Tigecycline	0.5	4	0.25–4	86.4
	Levofloxacin	>4	>4	0.12–>4	18.2
KPC-positive (2)[h]	Ceftazidime-avibactam	—[b]	—	1–8	100
	Ceftazidime	—	—	>128–>128	0
	Cefepime	—	—	>16–>16	0

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Aztreonam	—	—	>128–>128	0
	Piperacillin-tazobactam	—	—	>128–>128	0
	Doripenem	—	—	>4–>4	0
	Imipenem	—	—	>8–>8	0
	Meropenem	—	—	>8–8	0
	Amikacin	—	—	8–>32	50.0
	Colistin (n=2)[d]	—	—	1–2	100
	Tigecycline	—	—	0.25–0.5	100
	Levofloxacin	—	—	2–>4	50.0
OXA-48-like-positive (2)[i]	Ceftazidime-avibactam	—[b]	—	0.06–0.06	100
	Ceftazidime	—	—	16–32	0
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	16–64	0
	Piperacillin-tazobactam	—	—	4–>128	50.0
	Doripenem	—	—	0.03–0.25	100
	Imipenem	—	—	0.12–2	50.0
	Meropenem	—	—	0.015–0.5	100
	Amikacin	—	—	2–8	100
	Colistin (n=1)[d]	—	—	0.5	100
	Tigecycline	—	—	0.25–0.25	100
	Levofloxacin	—	—	1–>4	50.0
MBL-positive (11)[j]	Ceftazidime-avibactam	32	128	0.12–>128	9.1
	Ceftazidime	128	>128	0.25–>128	9.1
	Cefepime	>16	>16	1–>16	9.1
	Aztreonam	0.25	128	0.03–>128	63.6
	Piperacillin-tazobactam	>128	>128	1–>128	9.1
	Doripenem	>4	>4	2–>4	0
	Imipenem	4	>8	4–>8	0
	Meropenem	4	>8	1–>8	9.1
	Amikacin	32	>32	8- >32	45.5
	Colistin (n=10)[d]	1	>4	0.5–>4	60.0
	Tigecycline	0.5	2	0.5–4	90.9
	Levofloxacin	1	>4	0.25–>4	54.5
P. aeruginosa (181)					
ESBL-positive (10)[k,l]	Ceftazidime-avibactam	16	64	4–64	30.0
	Ceftazidime	>128	>128	128–>128	0
	Cefepime	>16	>16	0.25–>16	10.0
	Aztreonam	32	>128	8–>128	10.0
	Piperacillin-tazobactam	128	>128	64–>128	0
	Doripenem	>4	>4	>4–>4	0
	Imipenem	>8	>8	>8–>8	0
	Meropenem	>8	>8	>8–>8	0
	Amikacin	>32	>32	8–>32	20.0
	Colistin (n=6)[d]	—[b]	—	0.5–2	100
	Levofloxacin	>4	>4	1–>4	10.0
GES carbapenemase-positive (33)[k,m]	Ceftazidime-avibactam	32	128	2–>128	27.3
	Ceftazidime	>128	>128	32–>128	0
	Cefepime	>16	>16	16–>16	0
	Aztreonam	128	>128	8–>128	9.1
	Piperacillin-tazobactam	>128	>128	64–>128	0
	Doripenem	>4	>4	>4–>4	0
	Imipenem	>8	>8	2–>8	15.2
	Meropenem	>8	>8	8–>8	0
	Amikacin	>32	>32	8–>32	15.2
	Colistin (n=27)[d]	2	2	1–4	92.6
	Levofloxacin	>4	>4	>4–>4	0
GES, spectrum undefined-positive (1)[k,n]	Ceftazidime-avibactam	—[b]	—	>128	0

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Ceftazidime	—	—	>128	0
	Cefepime	—	—	>16	0
	Aztreonam	—	—	>128	0
	Piperacillin-tazobactam	—	—	>128	0
	Doripenem	—	—	>4	0
	Imipenem	—	—	>8	0
	Meropenem	—	—	>8	0
	Amikacin	—	—	>32	0
	Colistin (n=1)[d]	—	—	1	100
	Levofloxacin	—	—	>4	0
MBL-positive (9)[k,o]	Ceftazidime-avibactam	—[b]	—	2–>128	11.1
	Ceftazidime	—	—	8–>128	11.1
	Cefepime	—	—	4–>16	11.1
	Aztreonam	—	—	4–128	55.6
	Piperacillin-tazobactam	—	—	4–>128	44.4
	Doripenem	—	—	>4–>4	0
	Imipenem	—	—	8–>8	0
	Meropenem	—	—	4–>8	0
	Amikacin	—	—	2–>32	55.6
	Colistin (n=7)[d]	—	—	0.5–2	100
	Levofloxacin	—	—	1–>4	11.1
No acquired β-lactamase detected (124)[k]	Ceftazidime-avibactam	2	8	0.5–>128	90.6
	Ceftazidime	4	64	1–>128	68.8
	Cefepime	8	>16	0.5–>16	76.6
	Aztreonam	16	64	1–>128	45.3
	Piperacillin-tazobactam	16	>128	1–>128	60.9
	Doripenem	4	>4	0.25–>4	23.4
	Imipenem	>8	>8	1–>8	3.9
	Meropenem	8	>8	0.25–>8	18.0
	Amikacin	4	>32	1–>32	80.5
	Colistin (n=100)[d]	2	2	0.5–4	92.0
	Levofloxacin	2	>4	0.25–>4	58.6

[a] OSBL, original-spectrum β-lactamase (e.g. TEM-1, SHV-1, SHV-11); ESBL, extended-spectrum β-lactamase; MBL, metallo-β-lactamase.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only.

[e] Included isolates carrying CTX-M-3; CTX-M-14; CTX-M-15; CTX-M-27; CTX-M-55; CTX-M-79; CTX-M-15 and CTX-M-55; CTX-M-55 and CTX-M-79; CTX-M-15 and SHV-2; CTX-M-15 and SHV-2A; CTX-M-15 and SHV-5; CTX-M-15 and SHV-12; CTX-M-15 and SHV-108; CTX-M-15 and PER-1; SHV-2; SHV-2A; SHV-5; SHV-12; TEM-4; TEM-52; with or without a SHV-OSBL and/or TEM-OSBL.

[f] Included isolates carrying CMY-2 or the chromosomal AmpCs common to *Citrobacter* spp., *Enterobacter* spp., *M. morganii*, and *Serratia* spp. with or without a TEM-OSBL.

[g] Included isolates co-carrying CMY-2 and CTX-M-1, CTX-M-2, CTX-M-14, CTX-M-15, CTX-M-27, CTX-M-55, SHV-5, or SHV-12; CTX-M-15 and CMY-type; and the chromosomal AmpCs common to *Enterobacter* spp. and

Serratia spp. with CTX-M-15, SHV-5, or CTX-M-15 and SHV-12; with or without a SHV-OSBL and/or a TEM-OSBL.

[h] Isolates carrying KPC-3 or KPC-3 and SHV-5, with or without a SHV-OSBL and/or TEM-OSBL.

[i] Isolates carrying OXA-163 and CTX-M-15, or OXA-232 and CTX-M-15 and a TEM-OSBL.

[j] Included isolates carrying VIM-23 and the chromosomal AmpCs common to *Citrobacter* spp. and *Enterobacter* spp., VIM-23 and CTX-M-15; NDM-1; NDM-1 and CTX-M-15; with or without a SHV-OSBL and/or TEM-OSBL.

[k] Assumed to carry the chromosomal AmpC common to *P. aeruginosa*.

[l] Included isolates carrying GES-1; GES-19; or GES-1 and a GES-type β-lactamase.

[m] Included isolates carrying GES-5; GES-20; GES-5 and GES-1; or GES-20 and GES-19.

[n] Spectrum undefined, GES β-lactamase with undefined (ESBL or carbapenemase) activity; isolate carrying GES-26.

[o] Included isolates carrying IMP-1; IMP-15; IMP-18; or VIM-2.

Table S7A. Venezuela - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 1,498 isolates of *Enterobacteriaceae* and *P. aeruginosa* collected as part of the INFORM global surveillance program in 2012-2015.

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae					
All (1,201)	Ceftazidime-avibactam	0.12	0.25	≤0.015–>128	99.8
	Ceftazidime	0.25	64	≤0.015–>128	76.4
	Cefepime	≤0.12	>16	≤0.12–>16	77.9
	Aztreonam	0.12	64	≤0.015–>128	75.1
	Piperacillin-tazobactam	4	64	≤0.25–>128	86.3
	Doripenem	0.06	0.25	≤0.008–>4	98.1
	Imipenem	0.25	2	≤0.03–>8	85.2
	Meropenem	0.03	0.12	≤0.004–>8	98.3
	Amikacin	2	8	≤0.25–>32	94.8
	Colistin (n=700)[d]	0.5	>4	≤0.12–>4	83.0
	Tigecycline	0.5	2	≤0.015–>8	94.3
	Levofloxacin	0.12	>4	≤0.03–>4	68.5
All, MBL-negative (1,199)	Ceftazidime-avibactam	0.12	0.25	≤0.015–8	100
	Ceftazidime	0.25	64	≤0.015–>128	76.6
	Cefepime	≤0.12	>16	≤0.12–>16	78.0
	Aztreonam	0.12	64	≤0.015–>128	75.2
	Piperacillin-tazobactam	4	64	≤0.25–>128	86.4
	Doripenem	0.06	0.25	≤0.008–>4	98.3
	Imipenem	0.25	2	≤0.03–>8	85.3
	Meropenem	0.03	0.12	≤0.004–>8	98.4
	Amikacin	2	8	≤0.25–>32	94.8
	Colistin (n=698)[d]	0.5	>4	≤0.12–>4	83.0
	Tigecycline	0.5	2	≤0.015–>8	94.3
	Levofloxacin	0.12	>4	≤0.03–>4	68.6
Ceftazidime non-susceptible (283)	Ceftazidime-avibactam	0.25	1	≤0.015–>128	99.3
	Ceftazidime	64	128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	20.9
	Aztreonam	64	>128	0.12–>128	5.3
	Piperacillin-tazobactam	16	>128	≤0.25–>128	58.7
	Doripenem	0.06	0.25	0.015–>4	92.9
	Imipenem	0.25	2	0.06–>8	88.0
	Meropenem	0.06	0.12	0.015–>8	93.3
	Amikacin	8	>32	≤0.25–>32	80.6
	Colistin (n=168)[d]	0.5	1	≤0.12–>4	92.9
	Tigecycline	0.5	1	0.06–>8	95.8
	Levofloxacin	>4	>4	≤0.03–>4	31.1
Ceftazidime non-susceptible, MBL-negative (281)	Ceftazidime-avibactam	0.25	0.5	≤0.015–8	100
	Ceftazidime	64	128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	21.0
	Aztreonam	64	>128	0.12–>128	5.3
	Piperacillin-tazobactam	16	>128	≤0.25–>128	59.1
	Doripenem	0.06	0.25	0.015–>4	93.6
	Imipenem	0.25	2	0.06–>8	88.6
	Meropenem	0.06	0.12	0.015–>8	94.0
	Amikacin	8	>32	≤0.25–>32	80.4
	Colistin (n=166)[d]	0.5	1	≤0.12–>4	92.8
	Tigecycline	0.5	1	0.06–>8	95.7
	Levofloxacin	>4	>4	≤0.03–>4	31.0
Meropenem non-susceptible (21)	Ceftazidime-avibactam	0.5	2	0.03–>128	90.5
	Ceftazidime	64	>128	2–>128	9.5
	Cefepime	>16	>16	2–>16	4.8

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Aztreonam	>128	>128	4–>128	4.8
	Piperacillin-tazobactam	>128	>128	4–>128	9.5
	Doripenem	>4	>4	2–>4	0
	Imipenem	8	>8	1–>8	4.8
	Meropenem	>8	>8	2–>8	0
	Amikacin	4	>32	0.5–>32	61.9
	Colistin (n=15)[d]	0.5	2	0.25–>4	93.3
	Tigecycline	0.5	2	0.5–2	100
	Levofloxacin	>4	>4	0.06–>4	33.3
Meropenem non-susceptible, MBL-negative (19)	Ceftazidime-avibactam	0.5	2	0.03–2	100
	Ceftazidime	32	>128	2–>128	10.5
	Cefepime	>16	>16	2–>16	5.3
	Aztreonam	>128	>128	4–>128	5.3
	Piperacillin-tazobactam	>128	>128	4–>128	10.5
	Doripenem	4	>4	2–>4	0
	Imipenem	8	>8	1–>8	5.3
	Meropenem	>8	>8	2–>8	0
	Amikacin	8	>32	0.5–>32	57.9
	Colistin (n=13)[d]	0.5	2	0.25–>4	92.3
	Tigecycline	0.5	2	0.5–2	100
	Levofloxacin	>4	>4	0.06–>4	31.6
Colistin-resistant (13) [e,f]	Ceftazidime-avibactam	0.12	0.5	0.06–0.5	100
	Ceftazidime	0.5	8	0.25–8	84.6
	Cefepime	≤0.12	8	≤0.12–>16	84.6
	Aztreonam	0.12	16	0.06–64	84.6
	Piperacillin-tazobactam	4	16	2–16	100
	Doripenem	0.06	0.12	0.03–0.25	100
	Imipenem	1	1	0.12–2	92.3
	Meropenem	0.06	0.06	0.03–0.12	100
	Amikacin	2	4	0.5–4	100
	Colistin (n=13)[d]	>4	>4	4–>4	0
	Tigecycline	0.5	1	0.25–2	100
	Levofloxacin	0.12	>4	≤0.03–>4	76.9
Multidrug-resistant (196)	Ceftazidime-avibactam	0.25	1	≤0.015–>128	99.0
	Ceftazidime	64	>128	0.12–>128	8.7
	Cefepime	>16	>16	0.5–>16	3.1
	Aztreonam	64	>128	≤0.015–>128	3.6
	Piperacillin-tazobactam	16	>128	≤0.25–>128	51.5
	Doripenem	0.06	2	0.015–>4	88.8
	Imipenem	0.25	4	0.12–>8	82.7
	Meropenem	0.06	2	0.015–>8	89.3
	Amikacin	8	>32	≤0.25–>32	77.6
	Colistin (n=118)[d]	0.5	>4	≤0.12–>4	88.1
	Tigecycline	0.5	2	0.06–>8	94.4
	Levofloxacin	>4	>4	0.06–>4	9.7
Multidrug-resistant, MBL-negative (194)	Ceftazidime-avibactam	0.25	1	≤0.015–8	100
	Ceftazidime	32	128	0.12–>128	8.8
	Cefepime	>16	>16	0.5–>16	3.1
	Aztreonam	64	>128	≤0.015–>128	3.6
	Piperacillin-tazobactam	16	>128	≤0.25–>128	52.1
	Doripenem	0.06	2	0.015–>4	89.7
	Imipenem	0.25	4	0.12–>8	83.5
	Meropenem	0.06	1	0.015–>8	90.2
	Amikacin	8	>32	≤0.25–>32	77.3
	Colistin (n=116)[d]	0.5	>4	≤0.12–>4	87.9
	Tigecycline	0.5	2	0.06–>8	94.3
	Levofloxacin	>4	>4	0.06–>4	9.3
Escherichia coli[g]					
All (416)[e]	Ceftazidime-avibactam	0.12	0.25	≤0.015–8	100
	Ceftazidime	0.25	32	0.03–>128	72.6

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Cefepime	≤0.12	>16	≤0.12–>16	71.2
	Aztreonam	0.12	64	≤0.015–>128	70.0
	Piperacillin-tazobactam	4	32	0.5–>128	88.9
	Doripenem	0.03	0.06	0.015–0.25	100
	Imipenem	0.12	0.25	≤0.03–1	100
	Meropenem	0.03	0.03	0.008–0.12	100
	Amikacin	4	16	0.5–>32	98.1
	Colistin (n=236)[d]	0.5	1	≤0.12–4	99.6
	Tigecycline	0.25	0.5	≤0.015–1	100
	Levofloxacin	>4	>4	≤0.03–>4	46.4
Ceftazidime non-susceptible (114)[e]	Ceftazidime-avibactam	0.25	0.5	≤0.015–8	100
	Ceftazidime	32	128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	9.7
	Aztreonam	64	128	0.12–>128	2.6
	Piperacillin-tazobactam	8	64	0.5–>128	78.1
	Doripenem	0.03	0.06	0.015–0.12	100
	Imipenem	0.12	0.25	0.12–1	100
	Meropenem	0.03	0.06	0.015–0.12	100
	Amikacin	8	16	0.5–>32	96.5
	Colistin (n=63)[d]	0.5	1	≤0.12–2	100
	Tigecycline	0.25	0.5	0.06–1	100
	Levofloxacin	>4	>4	≤0.03–>4	6.1
Colistin-resistant (1)[e]	Ceftazidime-avibactam	—[b]	—	0.12	100
	Ceftazidime	—	—	0.25	100
	Cefepime	—	—	≤0.12	100
	Aztreonam	—	—	0.12	100
	Piperacillin-tazobactam	—	—	4	100
	Doripenem	—	—	0.06	100
	Imipenem	—	—	0.25	100
	Meropenem	—	—	0.03	100
	Amikacin	—	—	4	100
	Colistin (n=1)[d]	—	—	4	0
	Tigecycline	—	—	0.5	100
	Levofloxacin	—	—	>4	0
Multidrug-resistant (96)[e]	Ceftazidime-avibactam	0.25	0.5	0.03–8	100
	Ceftazidime	32	128	0.5–>128	3.1
	Cefepime	>16	>16	1–>16	1.0
	Aztreonam	64	128	0.12–>128	1.0
	Piperacillin-tazobactam	8	128	0.5–>128	76.0
	Doripenem	0.03	0.06	0.015–0.12	100
	Imipenem	0.12	0.25	0.12–0.5	100
	Meropenem	0.03	0.06	0.015–0.12	100
	Amikacin	8	16	0.5–>32	94.8
	Colistin (n=55)[d]	0.5	1	≤0.12–2	100
	Tigecycline	0.25	0.5	0.06–1	100
	Levofloxacin	>4	>4	>4–>4	0
Klebsiella pneumoniae					
All (319)	Ceftazidime-avibactam	0.12	0.5	≤0.015–>128	99.4
	Ceftazidime	0.25	128	0.03–>128	68.3
	Cefepime	≤0.12	>16	≤0.12–>16	71.8
	Aztreonam	0.12	128	≤0.015–>128	66.8
	Piperacillin-tazobactam	4	>128	≤0.25–>128	73.0
	Doripenem	0.06	0.12	0.015–>4	95.0
	Imipenem	0.25	0.5	0.06–>8	94.4
	Meropenem	0.03	0.12	0.008–>8	95.0
	Amikacin	1	32	≤0.25–>32	88.7
	Colistin (n=198)[d]	0.5	1	0.25–>4	99.0
	Tigecycline	0.5	1	0.06–>8	97.5
	Levofloxacin	0.06	>4	≤0.03–>4	71.8

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
All, MBL-negative (317)	Ceftazidime-avibactam	0.12	0.5	≤0.015–2	100
	Ceftazidime	0.25	128	0.03–>128	68.8
	Cefepime	≤0.12	>16	≤0.12–>16	72.2
	Aztreonam	0.12	128	≤0.015–>128	67.2
	Piperacillin-tazobactam	4	>128	≤0.25–>128	73.5
	Doripenem	0.06	0.12	0.015–>4	95.6
	Imipenem	0.25	0.5	0.06–>8	95.0
	Meropenem	0.03	0.12	0.008–>8	95.6
	Amikacin	1	32	≤0.25–>32	88.6
	Colistin (n=196)[d]	0.5	1	0.25–>4	99.0
	Tigecycline	0.5	1	0.06–>8	97.5
	Levofloxacin	0.06	>4	≤0.03–>4	71.9
Ceftazidime non-susceptible (101)	Ceftazidime-avibactam	0.25	1	≤0.015–>128	98.0
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	0.25–>16	15.8
	Aztreonam	128	>128	4–>128	1.0
	Piperacillin-tazobactam	128	>128	0.5–>128	31.7
	Doripenem	0.06	4	0.015–>4	85.2
	Imipenem	0.25	8	0.12–>8	85.2
	Meropenem	0.06	4	0.03–>8	85.2
	Amikacin	8	>32	≤0.25–>32	64.4
	Colistin (n=64)[d]	0.5	1	0.25–4	98.4
	Tigecycline	0.5	2	0.25–>8	95.1
	Levofloxacin	>4	>4	≤0.03–>4	28.7
Ceftazidime non-susceptible (99)	Ceftazidime-avibactam	0.25	1	≤0.015–2	100
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	0.25–>16	16.2
	Aztreonam	128	>128	4–>128	1.0
	Piperacillin-tazobactam	128	>128	0.5–>128	32.3
	Doripenem	0.06	4	0.015–>4	86.9
	Imipenem	0.25	8	0.12–>8	86.9
	Meropenem	0.06	4	0.03–>8	86.9
	Amikacin	8	>32	≤0.25–>32	63.6
	Colistin (n=62)[d]	0.5	1	0.25–4	98.4
	Tigecycline	0.5	2	0.25–>8	95.0
	Levofloxacin	>4	>4	≤0.03–>4	28.3
Meropenem non-susceptible (16)	Ceftazidime-avibactam	0.5	64	0.03–>128	87.5
	Ceftazidime	64	>128	2–>128	6.3
	Cefepime	8	>16	2–>16	6.3
	Aztreonam	128	>128	32–>128	0
	Piperacillin-tazobactam	>128	>128	4–>128	6.3
	Doripenem	4	>4	2–>4	0
	Imipenem	8	>8	1–>8	6.3
	Meropenem	>8	>8	2–>8	0
	Amikacin	8	>32	0.5–>32	56.3
	Colistin (n=10)[d]	0.5	1	0.25–2	100
	Tigecycline	0.5	2	0.5–2	100
	Levofloxacin	>4	>4	0.06–>4	31.3
Meropenem non-susceptible, MBL-negative (14)	Ceftazidime-avibactam	0.5	2	0.03–2	100
	Ceftazidime	32	>128	2–>128	7.1
	Cefepime	8	>16	2–>16	7.1
	Aztreonam	128	>128	32–>128	0
	Piperacillin-tazobactam	>128	>128	4–>128	7.1
	Doripenem	4	>4	2–>4	0
	Imipenem	8	>8	1–>8	7.1
	Meropenem	8	>8	2–>8	0
	Amikacin	8	>32	0.5–>32	50.0
	Colistin (n=8)[d]	0.5	2	0.25–2	100
	Tigecycline	0.5	1	0.5–2	100
	Levofloxacin	>4	>4	0.06–>4	28.6

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Colistin-resistant (2)[e]	Ceftazidime-avibactam	—[b]	—	0.12–0.5	100
	Ceftazidime	—	—	0.5–8	50.0
	Cefepime	—	—	≤0.12–8	50.0
	Aztreonam	—	—	0.12–64	50.0
	Piperacillin-tazobactam	—	—	4–8	100
	Doripenem	—	—	0.03–0.06	100
	Imipenem	—	—	0.12–0.25	100
	Meropenem	—	—	0.03–0.06	100
	Amikacin	—	—	0.5–1	100
	Colistin (n=2)[d]	—	—	4–>4	0
	Tigecycline	—	—	1–2	100
	Levofloxacin	—	—	>4–>4	0
Multidrug-resistant (69)	Ceftazidime-avibactam	0.5	1	≤0.015–>128	97.1
	Ceftazidime	64	>128	2–>128	2.9
	Cefepime	>16	>16	1–>16	2.9
	Aztreonam	128	>128	16–>128	0
	Piperacillin-tazobactam	>128	>128	1–>128	15.9
	Doripenem	0.12	>4	0.015–>4	76.8
	Imipenem	0.25	>8	0.12–>8	76.8
	Meropenem	0.06	>8	0.03–>8	76.8
	Amikacin	16	>32	≤0.25–>32	55.1
	Colistin (n=42)[d]	0.5	1	0.25–4	97.6
	Tigecycline	0.5	2	0.25–>8	94.2
	Levofloxacin	>4	>4	0.06–>4	13.0
Multidrug-resistant, MBL-negative (67)	Ceftazidime-avibactam	0.5	1	≤0.015–2	100
	Ceftazidime	64	>128	2–>128	3.0
	Cefepime	>16	>16	1–>16	3.0
	Aztreonam	128	>128	16–>128	0
	Piperacillin-tazobactam	>128	>128	1–>128	16.4
	Doripenem	0.12	4	0.015–>4	79.1
	Imipenem	0.25	8	0.12–>8	79.1
	Meropenem	0.06	>8	0.03–>8	79.1
	Amikacin	16	>32	≤0.25–>32	53.7
	Colistin (n=40)[d]	0.5	1	0.25–4	97.5
	Tigecycline	0.5	2	0.25–>8	94.0
	Levofloxacin	>4	>4	0.06–>4	11.9
Klebsiella oxytoca					
All (77)[e]	Ceftazidime-avibactam	0.12	0.5	0.03–1	100
	Ceftazidime	0.12	64	0.03–>128	83.1
	Cefepime	≤0.12	16	≤0.12–>16	83.1
	Aztreonam	0.12	128	≤0.015–>128	79.2
	Piperacillin-tazobactam	2	32	0.5–>128	88.3
	Doripenem	0.06	0.12	0.03–>4	97.4
	Imipenem	0.25	0.5	0.06–>8	96.1
	Meropenem	0.03	0.06	0.015–>8	97.4
	Amikacin	2	8	0.5–>32	96.1
	Colistin (n=42)[d]	0.5	1	≤0.12–4	97.6
	Tigecycline	0.25	0.5	0.06–1	100
	Levofloxacin	0.06	0.5	≤0.03–>4	97.4
Ceftazidime non-susceptible (13)[e]	Ceftazidime-avibactam	0.25	1	0.12–1	100
	Ceftazidime	64	>128	16–>128	0
	Cefepime	16	>16	0.5–>16	15.4
	Aztreonam	128	>128	32–>128	0
	Piperacillin-tazobactam	8	>128	2–>128	53.9
	Doripenem	0.06	>4	0.03–>4	84.6
	Imipenem	0.25	8	0.06–>8	84.6
	Meropenem	0.06	>8	0.03–>8	84.6
	Amikacin	8	32	0.5–>32	76.9
	Colistin (n=7)[d]	—[b]	—	0.25–1	100

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Tigecycline	0.25	1	0.06–1	100
	Levofloxacin	0.5	2	0.06–2	100
Meropenem non-susceptible (2)[e]	Ceftazidime-avibactam	—[b]	—	0.5–1	100
	Ceftazidime	—	—	32–>128	0
	Cefepime	—	—	8–>16	0
	Aztreonam	—	—	>128–>128	0
	Piperacillin-tazobactam	—	—	>128–>128	0
	Doripenem	—	—	>4–>4	0
	Imipenem	—	—	8–>8	0
	Meropenem	—	—	>8–>8	0
	Amikacin	—	—	2–32	50.0
	Colistin (n=2)[d]	—	—	0.25–0.5	100
	Tigecycline	—	—	0.5–1	100
	Levofloxacin	—	—	0.12–2	100
Colistin-resistant (1)[e]	Ceftazidime-avibactam	—[b]	—	0.12	100
	Ceftazidime	—	—	0.25	100
	Cefepime	—	—	≤0.12	100
	Aztreonam	—	—	0.25	100
	Piperacillin-tazobactam	—	—	2	100
	Doripenem	—	—	0.06	100
	Imipenem	—	—	0.25	100
	Meropenem	—	—	0.06	100
	Amikacin	—	—	2	100
	Colistin (n=1)[d]	—	—	4	0
	Tigecycline	—	—	0.5	100
	Levofloxacin	—	—	0.06	100
Multidrug-resistant (4)[e]	Ceftazidime-avibactam	—[b]	—	0.5–1	100
	Ceftazidime	—	—	2–>128	25.0
	Cefepime	—	—	8–>16	0
	Aztreonam	—	—	128–>128	0
	Piperacillin-tazobactam	—	—	>128–>128	0
	Doripenem	—	—	0.12–>4	50.0
	Imipenem	—	—	0.25–>8	50.0
	Meropenem	—	—	0.06–>8	50.0
	Amikacin	—	—	2–32	75.0
	Colistin (n=3)[d]	—	—	0.25–0.5	100
	Tigecycline	—	—	0.5–1	100
	Levofloxacin	—	—	0.12–2	100
Enterobacter spp.					
All (136)[e,h]	Ceftazidime-avibactam	0.12	0.5	≤0.015–4	100
	Ceftazidime	0.25	64	0.03–>128	79.4
	Cefepime	≤0.12	8	≤0.12–>16	87.5
	Aztreonam	0.12	64	≤0.015–>128	78.7
	Piperacillin-tazobactam	4	32	≤0.25–>128	89.7
	Doripenem	0.06	0.12	≤0.008–>4	98.5
	Imipenem	0.5	2	0.12–>8	80.9
	Meropenem	0.06	0.06	0.015–>8	99.3
	Amikacin	1	4	0.5–>32	95.6
	Colistin (n=79)[d]	0.5	>4	0.25–>4	88.6
	Tigecycline	0.5	1	0.25–2	100
	Levofloxacin	0.06	1	≤0.03–>4	94.9
Ceftazidime non-susceptible (28)[e]	Ceftazidime-avibactam	0.25	1	0.06–4	100
	Ceftazidime	64	128	8–>128	0
	Cefepime	4	>16	≤0.12–>16	39.3
	Aztreonam	64	>128	8–>128	0
	Piperacillin-tazobactam	16	>128	2–>128	53.6
	Doripenem	0.06	0.25	0.06–>4	92.9
	Imipenem	0.5	2	0.12–>8	89.3
	Meropenem	0.06	0.12	0.03–>8	96.4

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Amikacin	2	>32	0.5–>32	78.6
	Colistin (n=14)[d]	0.5	1	0.25–>4	92.9
	Tigecycline	0.5	1	0.25–2	100
	Levofloxacin	0.25	>4	≤0.03–>4	89.3
Meropenem non-susceptible (1)[e]	Ceftazidime-avibactam	—[b]	—	1	100
	Ceftazidime	—	—	32	0
	Cefepime	—	—	>16	0
	Aztreonam	—	—	>128	0
	Piperacillin-tazobactam	—	—	>128	0
	Doripenem	—	—	>4	0
	Imipenem	—	—	>8	0
	Meropenem	—	—	>8	0
	Amikacin	—	—	2	100
	Colistin (n=1)[d]	—	—	0.5	100
	Tigecycline	—	—	2	100
	Levofloxacin	—	—	>4	0
Colistin-resistant (9)[e]	Ceftazidime-avibactam	—[b]	—	0.06–0.5	100
	Ceftazidime	—	—	0.25–8	88.9
	Cefepime	—	—	≤0.12–>16	88.9
	Aztreonam	—	—	0.06–16	88.9
	Piperacillin-tazobactam	—	—	2–16	100
	Doripenem	—	—	0.03–0.25	100
	Imipenem	—	—	0.5–2	88.9
	Meropenem	—	—	0.03–0.12	100
	Amikacin	—	—	1–4	100
	Colistin (n=9)[d]	—	—	4–>4	0
	Tigecycline	—	—	0.25–1	100
	Levofloxacin	—	—	≤0.03–2	100
Multidrug-resistant (8)[e]	Ceftazidime-avibactam	—[b]	—	0.06–4	100
	Ceftazidime	—	—	8–>128	0
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	16–>128	0
	Piperacillin-tazobactam	—	—	4–>128	25.0
	Doripenem	—	—	0.06–>4	75.0
	Imipenem	—	—	0.5–>8	75.0
	Meropenem	—	—	0.06–>8	87.5
	Amikacin	—	—	0.5–>32	62.5
	Colistin (n=4)[d]	—	—	0.25–>4	75.0
	Tigecycline	—	—	0.25–2	100
	Levofloxacin	—	—	0.06–>4	62.5
Citrobacter spp.[j]					
All (66)[e,i]	Ceftazidime-avibactam	0.12	0.25	0.03–0.5	100
	Ceftazidime	0.25	64	0.06–>128	78.8
	Cefepime	≤0.12	2	≤0.12–>16	90.9
	Aztreonam	0.12	64	0.03–>128	78.8
	Piperacillin-tazobactam	4	32	0.5–>128	89.4
	Doripenem	0.03	0.06	0.015–4	98.5
	Imipenem	0.5	2	0.06–4	83.3
	Meropenem	0.03	0.06	≤0.004–4	98.5
	Amikacin	2	4	0.5–>32	97.0
	Colistin (n=35)[d]	0.5	1	≤0.12–1	100
	Tigecycline	0.25	0.5	0.06–2	100
	Levofloxacin	0.06	>4	≤0.03–>4	86.4
Ceftazidime non-susceptible (14)[e]	Ceftazidime-avibactam	0.25	0.5	0.12–0.5	100
	Ceftazidime	64	>128	16–>128	0
	Cefepime	1	>16	0.25–>16	57.1
	Aztreonam	32	>128	4–>128	7.1
	Piperacillin-tazobactam	8	>128	2–>128	71.4
	Doripenem	0.06	0.25	0.03–4	92.9

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Imipenem	1	2	0.12–4	71.4
	Meropenem	0.06	0.12	0.03–4	92.9
	Amikacin	2	8	1–>32	92.9
	Colistin (n=9)[d]	—[b]	—	0.25–1	100
	Tigecycline	0.25	0.5	0.06–1	100
	Levofloxacin	1	>4	0.06–>4	64.3
Meropenem non-susceptible (1)[e]	Ceftazidime-avibactam	—[b]	—	0.5	100
	Ceftazidime	—	—	>128	0
	Cefepime	—	—	>16	0
	Aztreonam	—	—	>128	0
	Piperacillin-tazobactam	—	—	>128	0
	Doripenem	—	—	4	0
	Imipenem	—	—	4	0
	Meropenem	—	—	4	0
	Amikacin	—	—	2	100
	Colistin (n=1)[d]	—	—	1	100
	Tigecycline	—	—	0.5	100
	Levofloxacin	—	—	>4	0
Multidrug-resistant (4)[e]	Ceftazidime-avibactam	—[b]	—	0.12–0.5	100
	Ceftazidime	—	—	32–>128	0
	Cefepime	—	—	1–>16	25.0
	Aztreonam	—	—	16–>128	0
	Piperacillin-tazobactam	—	—	2–>128	50.0
	Doripenem	—	—	0.03–4	75.0
	Imipenem	—	—	0.12–4	75.0
	Meropenem	—	—	0.03–4	75.0
	Amikacin	—	—	1–>32	75.0
	Colistin (n=2)[d]	—	—	0.5–1	100
	Tigecycline	—	—	0.25–0.5	100
	Levofloxacin	—	—	0.06–>4	25.0
Proteeae					
All (143)[e,k]	Ceftazidime-avibactam	0.06	0.12	≤0.015–0.5	100
	Ceftazidime	0.06	4	≤0.015–64	92.3
	Cefepime	≤0.12	8	≤0.12–>16	87.4
	Aztreonam	≤0.015	1	≤0.015–128	95.1
	Piperacillin-tazobactam	0.5	2	≤0.25–>128	97.9
	Doripenem	0.25	0.5	0.06–2	98.6
	Imipenem	2	4	0.5–>8	17.5
	Meropenem	0.12	0.12	0.03–2	99.3
	Amikacin	4	8	0.5–>32	95.8
	Colistin (n=83)[d]	>4	>4	0.5–>4	2.4
	Tigecycline	2	4	0.12–>8	59.4
	Levofloxacin	0.5	>4	≤0.03–>4	68.5
Ceftazidime-non-susceptible (11)[e]	Ceftazidime-avibactam	0.12	0.25	0.06–0.25	100
	Ceftazidime	32	64	8–64	0
	Cefepime	0.5	2	≤0.12–2	100
	Aztreonam	2	4	0.5–8	90.9
	Piperacillin-tazobactam	2	4	≤0.25–8	100
	Doripenem	0.25	0.5	0.12–0.5	100
	Imipenem	2	4	1–4	9.1
	Meropenem	0.12	0.25	0.12–0.25	100
	Amikacin	8	>32	2–>32	63.6
	Colistin (n=9)[d]	—[b]	—	1–>4	11.1
	Tigecycline	4	4	1–>8	36.4
	Levofloxacin	4	>4	0.06–>4	45.5
Meropenem non-susceptible (1)[e]	Ceftazidime-avibactam	—[b]	—	0.5	100
	Ceftazidime	—	—	4	100
	Cefepime	—	—	>16	0
	Aztreonam	—	—	4	100

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Piperacillin-tazobactam	—	—	4	100
	Doripenem	—	—	2	0
	Imipenem	—	—	4	0
	Meropenem	—	—	2	0
	Amikacin	—	—	2	100
	Colistin (n=1)[d]	—	—	>4	0
	Tigecycline	—	—	2	100
	Levofloxacin	—	—	>4	0
Multidrug-resistant (13)[e]	Ceftazidime-avibactam	0.06	0.25	0.03–0.5	100
	Ceftazidime	0.5	32	0.12–64	84.6
	Cefepime	>16	>16	0.5–>16	15.4
	Aztreonam	8	128	≤0.015–128	46.2
	Piperacillin-tazobactam	2	>128	≤0.25–>128	84.6
	Doripenem	0.25	1	0.25–2	92.3
	Imipenem	4	4	2–4	0
	Meropenem	0.12	0.25	0.06–2	92.3
	Amikacin	8	>32	0.5–>32	84.6
	Colistin (n=10)[d]	>4	>4	>4–>4	0
	Tigecycline	4	8	0.25–>8	46.2
	Levofloxacin	>4	>4	>4–>4	0
Other *Enterobacteriaceae*[g,j]					
All (44)[e,l]	Ceftazidime-avibactam	0.12	0.25	0.03–1	100
	Ceftazidime	0.12	0.5	0.03–32	95.4
	Cefepime	≤0.12	0.25	≤0.12–>16	95.4
	Aztreonam	0.12	0.25	0.03–128	95.4
	Piperacillin-tazobactam	2	8	0.5–16	100
	Doripenem	0.12	0.25	0.03–0.25	100
	Imipenem	0.5	1	0.25–2	95.4
	Meropenem	0.06	0.06	0.03–0.12	100
	Amikacin	2	4	0.5–>32	97.7
	Colistin (n=27)[d]	>4	>4	≤0.12–>4	7.4
	Tigecycline	1	2	0.06–4	95.4
	Levofloxacin	0.12	0.5	≤0.03–>4	95.4
Ceftazidime-non-susceptible (2)[e]	Ceftazidime-avibactam	—[b]	—	0.5–0.5	100
	Ceftazidime	—	—	8–32	0
	Cefepime	—	—	8–>16	0
	Aztreonam	—	—	32–128	0
	Piperacillin-tazobactam	—	—	8–16	100
	Doripenem	—	—	0.12–0.25	100
	Imipenem	—	—	0.5–1	100
	Meropenem	—	—	0.06–0.12	100
	Amikacin	—	—	4–>32	50.0
	Colistin (n=2)[d]	—	—	>4–>4	0
	Tigecycline	—	—	1–1	100
	Levofloxacin	—	—	4–>4	0
Multidrug-resistant (2)[e]	Ceftazidime-avibactam	—[b]	—	0.5–0.5	100
	Ceftazidime	—	—	8–32	0
	Cefepime	—	—	8–>16	0
	Aztreonam	—	—	32–128	0
	Piperacillin-tazobactam	—	—	8–16	100
	Doripenem	—	—	0.12–0.25	100
	Imipenem	—	—	0.5–1	100
	Meropenem	—	—	0.06–0.12	100
	Amikacin	—	—	4–>32	50.0
	Colistin (n=2)[d]	—	—	>4–>4	0
	Tigecycline	—	—	1–1	100
	Levofloxacin	—	—	4–>4	0
Pseudomonas aeruginosa[j]					
All (297)	Ceftazidime-avibactam	2	32	0.12–>128	83.8

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Ceftazidime	4	32	0.5–>128	75.4
	Cefepime	4	>16	0.25–>16	75.4
	Aztreonam	8	32	0.25–>128	60.3
	Piperacillin-tazobactam	8	128	≤0.25–>128	70.0
	Doripenem	1	>4	0.06–>4	69.0
	Imipenem	2	>8	0.25–>8	60.6
	Meropenem	1	>8	≤0.06–>8	67.7
	Amikacin	4	>32	≤0.25–>32	77.1
	Colistin (n=217)[d]	2	2	0.5–4	94.9
	Levofloxacin	0.5	>4	≤0.03–>4	66.7
All, MBL-negative (249)	Ceftazidime-avibactam	2	4	0.12–32	99.2
	Ceftazidime	2	16	0.5–>128	90.0
	Cefepime	2	16	0.25–>16	89.2
	Aztreonam	8	32	0.25–>128	70.3
	Piperacillin-tazobactam	8	64	≤0.25–>128	83.5
	Doripenem	0.5	>4	0.06–>4	82.3
	Imipenem	2	>8	0.25–>8	72.3
	Meropenem	0.5	>8	≤0.06–>8	80.7
	Amikacin	4	16	≤0.25–>32	91.6
	Colistin (n=183)[d]	2	2	0.5–4	94.5
	Levofloxacin	0.5	>4	≤0.03–>4	78.7
Ceftazidime-non-susceptible (73)	Ceftazidime-avibactam	32	32	0.12–>128	34.3
	Ceftazidime	32	64	16–>128	0
	Cefepime	16	>16	4–>16	13.7
	Aztreonam	16	64	2–>128	6.9
	Piperacillin-tazobactam	64	>128	8–>128	5.5
	Doripenem	>4	>4	0.06–>4	20.6
	Imipenem	>8	>8	0.25–>8	21.9
	Meropenem	>8	>8	0.06–>8	20.6
	Amikacin	>32	>32	2–>32	28.8
	Colistin (n=52)[d]	1	2	0.5–4	96.2
	Levofloxacin	>4	>4	0.06–>4	20.6
Ceftazidime-non-susceptible, MBL-negative (25)	Ceftazidime-avibactam	4	8	0.12–32	92.0
	Ceftazidime	32	>128	16–>128	0
	Cefepime	16	>16	4–>16	32.0
	Aztreonam	32	>128	8–>128	4.0
	Piperacillin-tazobactam	128	>128	8–>128	16.0
	Doripenem	2	>4	0.06–>4	60.0
	Imipenem	2	>8	0.25–>8	64.0
	Meropenem	1	>8	0.06–>8	60.0
	Amikacin	8	>32	2–>32	80.0
	Colistin (n=18)[d]	1	2	0.5–4	94.4
	Levofloxacin	2	>4	0.06–>4	52.0
Meropenem non-susceptible (96)	Ceftazidime-avibactam	8	32	0.5–>128	50.0
	Ceftazidime	32	64	1–>128	39.6
	Cefepime	16	>16	1–>16	34.4
	Aztreonam	16	32	2–>128	18.8
	Piperacillin-tazobactam	64	>128	2–>128	27.1
	Doripenem	>4	>4	1–>4	6.3
	Imipenem	>8	>8	2–>8	3.1
	Meropenem	>8	>8	4–>8	0
	Amikacin	>32	>32	1–>32	35.4
	Colistin (n=69)[d]	2	2	0.5–4	97.1
	Levofloxacin	>4	>4	0.25–>4	19.8
Meropenem non-susceptible, MBL-negative (48)	Ceftazidime-avibactam	4	8	0.5–32	95.8
	Ceftazidime	8	64	1–>128	79.2
	Cefepime	8	>16	1–>16	64.6
	Aztreonam	32	64	2–>128	29.2
	Piperacillin-tazobactam	16	>128	2–>128	54.2

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Doripenem	>4	>4	1–>4	12.5
	Imipenem	>8	>8	2–>8	6.3
	Meropenem	>8	>8	4–>8	0
	Amikacin	8	>32	1–>32	68.8
	Colistin (n=35)[d]	2	2	0.5–4	97.1
	Levofloxacin	>4	>4	0.25–>4	35.4
Multidrug-resistant (75)	Ceftazidime-avibactam	16	32	2–>128	37.3
	Ceftazidime	32	64	4–>128	25.3
	Cefepime	16	>16	2–>16	17.3
	Aztreonam	16	64	2–>128	9.3
	Piperacillin-tazobactam	64	>128	4–>128	13.3
	Doripenem	>4	>4	0.5–>4	6.7
	Imipenem	>8	>8	1–>8	6.7
	Meropenem	>8	>8	0.12–>8	4.0
	Amikacin	>32	>32	2–>32	20.0
	Colistin (n=53)[d]	1	2	0.5–4	96.2
	Levofloxacin	>4	>4	0.25–>4	8.0
Multidrug-resistant, MBL-negative (29)	Ceftazidime-avibactam	4	8	2–32	93.1
	Ceftazidime	8	>128	4–>128	65.5
	Cefepime	>16	>16	2–>16	37.9
	Aztreonam	32	>128	8–>128	10.3
	Piperacillin-tazobactam	128	>128	4–>128	34.5
	Doripenem	>4	>4	0.5–>4	17.2
	Imipenem	>8	>8	1–>8	17.2
	Meropenem	>8	>8	0.12–>8	10.3
	Amikacin	16	>32	2–>32	51.7
	Colistin (n=19)[d]	1	2	1–4	94.7
	Levofloxacin	>4	>4	0.25–>4	13.8

[a] MBL-negative, no gene encoding a metallo-β-lactamase was detected by polymerase chain reaction assay.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only.

[e] All isolates were MBL-negative.

[f] Excluded isolates of Proteeae and *Serratia* spp., which are intrinsically resistant to colistin.

[g] No meropenem non-susceptible isolates were collected.

[h] *Enterobacter* spp. included *Enterobacter aerogenes* (n=50), *Enterobacter asburiae* (n=9), *Enterobacter cloacae* (n=75), and *Enterobacter kobei* (n=2).

[i] *Citrobacter* spp. included *Citrobacter braakii* (n=1), *Citrobacter freundii* (n=43), and *Citrobacter koseri* (n=22).

[j] No colistin-resistant isolates were collected.

[k] Proteeae included *Morganella morganii* (n=39), *Proteus mirabilis* (n=75), *Proteus penneri* (n=2), *Proteus vulgaris* (n=15), *Providencia alcalifaciens* (n=2), *Providencia rettgeri* (n=2), and *Providencia stuartii* (n=8).

[l] Other *Enterobacteriaceae* included *Escherichia vulneris* (n=1), *Klebsiella variicola* (n=1), *Raoultella ornithinolytica* (n=1), *Serratia marcescens* (n=40), and *Serratia ureilytica* (n=1).

Table S7B. Venezuela - *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 416 isolates of β-lactamase-positive *Enterobacteriaceae* (n=301) and *P. aeruginosa* (n=115) collected as part of the INFORM global surveillance program in 2012–2015.

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae (301)					
OSBL-positive (7)	Ceftazidime-avibactam	—[b]	—	0.06–0.5	100
	Ceftazidime	—	—	0.12–64	42.9
	Cefepime	—	—	≤0.12–16	85.7
	Aztreonam	—	—	0.06–32	57.1
	Piperacillin-tazobactam	—	—	0.5–>128	57.1
	Doripenem	—	—	0.03–0.5	100
	Imipenem	—	—	0.12–4	57.1
	Meropenem	—	—	0.03–0.12	100
	Amikacin	—	—	1–>32	85.7
	Colistin (n=5)[d]	—	—	0.5–>4	80.0
	Tigecycline	—	—	0.5–4	85.7
	Levofloxacin	—	—	0.12–>4	57.1
Spectrum-undefined-positive (1)[e]	Ceftazidime-avibactam	—[b]	—	1	100
	Ceftazidime	—	—	16	0
	Cefepime	—	—	16	0
	Aztreonam	—	—	32	0
	Piperacillin-tazobactam	—	—	4	100
	Doripenem	—	—	0.03	100
	Imipenem	—	—	0.25	100
	Meropenem	—	—	0.03	100
	Amikacin	—	—	0.5	100
	Colistin (n=0)[d]	—	—	ND[d]	ND
	Tigecycline	—	—	0.5	100
	Levofloxacin	—	—	>4	0
ESBL-positive (231)[f]	Ceftazidime-avibactam	0.25	0.5	≤0.015–8	100
	Ceftazidime	32	128	0.25–>128	16.0
	Cefepime	>16	>16	0.25–>16	11.7
	Aztreonam	64	128	0.5–>128	6.5
	Piperacillin-tazobactam	16	>128	≤0.25–>128	64.9
	Doripenem	0.06	0.12	0.015–4	99.6
	Imipenem	0.25	0.5	0.06–4	97.8
	Meropenem	0.03	0.12	0.015–4	99.6
	Amikacin	8	>32	≤0.25–>32	84.0
	Colistin (n=130)[d]	0.5	1	≤0.12–>4	96.2
	Tigecycline	0.5	1	0.06–>8	96.5
	Levofloxacin	>4	>4	≤0.03–>4	23.4
AmpC-positive (38)[g]	Ceftazidime-avibactam	0.12	0.5	0.03–0.5	100
	Ceftazidime	0.5	128	0.06–128	57.9
	Cefepime	≤0.12	2	≤0.12–>16	92.1
	Aztreonam	0.25	32	≤0.015–64	68.4
	Piperacillin-tazobactam	4	64	≤0.25–>128	78.9
	Doripenem	0.06	0.5	≤0.008–1	100
	Imipenem	2	8	0.12–>8	36.8
	Meropenem	0.06	0.25	0.015–1	100
	Amikacin	2	8	≤0.25–32	97.4
	Colistin (n=22)[d]	0.5	>4	0.25–>4	81.8
	Tigecycline	0.5	2	0.12–4	92.1
	Levofloxacin	0.12	>4	≤0.03–>4	71.1
ESBL-positive + AmpC-positive (6)[h]	Ceftazidime-avibactam	—[b]	—	0.25–2	100

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
	Ceftazidime	—	—	4–>128	16.7
	Cefepime	—	—	2–>16	16.7
	Aztreonam	—	—	4–128	16.7
	Piperacillin-tazobactam	—	—	2–>128	50.0
	Doripenem	—	—	0.06–>4	66.7
	Imipenem	—	—	0.25–>8	50.0
	Meropenem	—	—	0.06–>8	66.7
	Amikacin	—	—	2–>32	66.7
	Colistin (n=3)[d]	—	—	0.5–>4	66.7
	Tigecycline	—	—	0.25–2	100
	Levofloxacin	—	—	1–>4	16.7
KPC-positive (16)[i]	Ceftazidime-avibactam	0.5	1	0.03–2	100
	Ceftazidime	32	>128	2–>128	6.3
	Cefepime	8	>16	2–>16	6.3
	Aztreonam	>128	>128	32–>128	0
	Piperacillin-tazobactam	>128	>128	128–>128	0
	Doripenem	4	>4	2–>4	0
	Imipenem	8	>8	4–>8	0
	Meropenem	>8	>8	2–>8	0
	Amikacin	2	>32	0.5–>32	56.3
	Colistin (n=12)[d]	0.5	1	0.25–2	100
	Tigecycline	0.5	2	0.5–2	100
	Levofloxacin	>4	>4	0.06–>4	37.5
MBL-positive (2)[j]	Ceftazidime-avibactam	—[b]	—	64–>128	0
	Ceftazidime	—	—	>128–>128	0
	Cefepime	—	—	>16–>16	0
	Aztreonam	—	—	64–128	0
	Piperacillin-tazobactam	—	—	>128–>128	0
	Doripenem	—	—	>4–>4	0
	Imipenem	—	—	>8–>8	0
	Meropenem	—	—	>8–>8	0
	Amikacin	—	—	4–4	100
	Colistin (n=2)[d]	—	—	0.25–1	100
	Tigecycline	—	—	0.5–2	100
	Levofloxacin	—	—	1–>4	50.0
P. aeruginosa (115)					
ESBL-positive (1)[k,l]	Ceftazidime-avibactam	—[b]	—	8	100
	Ceftazidime	—	—	8	100
	Cefepime	—	—	>16	0
	Aztreonam	—	—	32	0
	Piperacillin-tazobactam	—	—	128	0
	Doripenem	—	—	>4	0
	Imipenem	—	—	>8	0
	Meropenem	—	—	>8	0
	Amikacin	—	—	16	100
	Colistin (n=0)[d]	—	—	ND[d]	ND
	Levofloxacin	—	—	>4	0
MBL-positive (48)[k,m]	Ceftazidime-avibactam	32	64	8–>128	4.2
	Ceftazidime	32	64	16–>128	0
	Cefepime	16	>16	8–>16	4.2
	Aztreonam	16	32	2–>128	8.3
	Piperacillin-tazobactam	64	>128	32–>128	0
	Doripenem	>4	>4	4–>4	0
	Imipenem	>8	>8	8–>8	0
	Meropenem	>8	>8	4–>8	0
	Amikacin	>32	>32	16–>32	2.1
	Colistin (n=34)[d]	1	2	0.5–4	97.1
	Levofloxacin	>4	>4	2–>4	4.2

Organism/Genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
No acquired β-lactamase detected (66)[k]	Ceftazidime-avibactam	4	8	0.5–32	97.0
	Ceftazidime	4	32	1–>128	81.8
	Cefepime	8	>16	1–>16	74.2
	Aztreonam	16	32	2–>128	47.0
	Piperacillin-tazobactam	16	>128	2–>128	63.6
	Doripenem	4	>4	0.12–>4	36.4
	Imipenem	>8	>8	2–>8	6.1
	Meropenem	8	>8	0.12–>8	28.8
	Amikacin	4	>32	1–>32	77.3
	Colistin (n=44)[d]	2	2	0.5–4	95.5
	Levofloxacin	4	>4	0.25–>4	47.0

[a] OSBL, original-spectrum β-lactamase (e.g. TEM-1, SHV-1, SHV-11); ESBL, extended-spectrum β-lactamase; MBL, metallo-β-lactamase.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only. ND, not determined; MIC range and % susceptible were not determined for n=0 isolates.

[e] Spectrum undefined, SHV-type and/or TEM-type β-lactamases with undefined spectrum of activity; isolate carrying TEM-214.

[f] Included isolates carrying CTX-M-1; CTX-M-2; CTX-M-8; CTX-M-12; CTX-M-14; CTX-M-15; CTX-M-27; CTX-M-32; CTX-M-65; CTX-M-124; CTX-M-type; SHV-2; SHV-2A; SHV-12; SHV-28; PER-1; CTX-M-15 and CTX-M-14; CTX-M-1 and SHV-12; CTX-M-2 and SHV-12; CTX-M-15 and SHV-5; CTX-M-15 and SHV-12; CTX-M-15 and SHV-31; SHV-2 and SHV-41; with or without a SHV-OSBL and/or TEM-OSBL.

[g] Included isolates carrying CMY-2; DHA-1; or the chromosomal AmpCs common to *Citrobacter* spp., *Enterobacter* spp., and *M. morganii* with or without a TEM-OSBL.

[h] Included isolates co-carrying CMY-2 and CTX-M-15 or the chromosomal ESBL common to *K. oxytoca*; and isolates carrying the chromosomal AmpC common to *Enterobacter* spp. and CTX-M-12, or CTX-M-12 and SHV-5, with or without a TEM-OSBL.

[i] Isolates carrying KPC-2; KPC-3; KPC-2 and CTX-M-1; KPC-2 and CTX-M-12; KPC-2 and CTX-M-15; KPC-3 and SHV-12; KPC-2 and CTX-M-1 and CTX-M-2; KPC-3 and CTX-M-12 and SHV-12; with or without a SHV-OSBL and/or TEM-OSBL.

[j] Included isolates carrying NDM-1 and the chromosomal AmpC common to *Providencia* spp., or NDM-1 and CTX-M-15 with or without a SHV-OSBL and/or TEM-OSBL.

[k] Assumed to carry the chromosomal AmpC common to *P. aeruginosa*.

[l] Isolate carrying PER-1.

[m] Included isolates carrying VIM-2 with or without a TEM-OSBL; VIM-50.

Table S8. *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 2,848 isolates of ceftazidime non-susceptible *Enterobacteriaceae* and *P. aeruginosa* collected in the Latin America region as part of the INFORM global surveillance program in 2012-2015

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae (2,310)	Ceftazidime-avibactam	0.25	2	≤0.015–>128	99.0
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	16.2
	Aztreonam	64	>128	0.06–>128	4.3
	Piperacillin-tazobactam	32	>128	≤0.25–>128	48.8
	Doripenem	0.06	4	≤0.008–>4	86.0
	Imipenem	0.25	4	0.06–>8	83.9
	Meropenem	0.06	4	≤0.004–>8	84.1
	Amikacin	4	32	≤0.25–>32	86.1
	Colistin (n=1,364)[d]	0.5	2	≤0.12–>4	91.0
	Tigecycline	0.5	2	≤0.015–>8	95.2
	Levofloxacin	>4	>4	≤0.03–>4	33.4
Enterobacteriaceae, MBL-negative (2,294)	Ceftazidime-avibactam	0.25	2	≤0.015–>128	99.7
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	16.3
	Aztreonam	64	>128	0.06–>128	4.0
	Piperacillin-tazobactam	32	>128	≤0.25–>128	49.1
	Doripenem	0.06	4	≤0.008–>4	86.6
	Imipenem	0.25	4	0.06–>8	84.4
	Meropenem	0.06	4	≤0.004–>8	84.7
	Amikacin	4	32	≤0.25–>32	86.3
	Colistin (n=1,348)[d]	0.5	2	≤0.12–>4	91.3
	Tigecycline	0.5	2	≤0.015–>8	95.3
	Levofloxacin	>4	>4	≤0.03–>4	33.2
Escherichia coli (786)	Ceftazidime-avibactam	0.25	0.5	≤0.015–32	99.8
	Ceftazidime	32	128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	8.9
	Aztreonam	64	128	0.12–>128	2.5
	Piperacillin-tazobactam	8	128	0.5–>128	74.8
	Doripenem	0.03	0.06	≤0.008–>4	98.4
	Imipenem	0.25	0.5	0.06–>8	97.7
	Meropenem	0.03	0.06	≤0.004–>8	97.8
	Amikacin	8	16	0.5–>32	92.1
	Colistin (n=440)[d]	0.5	1	≤0.12–>4	99.6
	Tigecycline	0.25	0.5	0.06–4	99.6
	Levofloxacin	>4	>4	≤0.03–>4	9.7
Escherichia coli, MBL-negative (784)	Ceftazidime-avibactam	0.25	0.5	≤0.015–8	100
	Ceftazidime	32	128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	8.9
	Aztreonam	64	128	0.12–>128	2.6
	Piperacillin-tazobactam	8	128	0.5–>128	75.0
	Doripenem	0.03	0.06	≤0.008–>4	98.6
	Imipenem	0.25	0.25	0.06–>8	98.0
	Meropenem	0.03	0.06	≤0.004–>8	98.1
	Amikacin	8	16	0.5–>32	92.2
	Colistin (n=438)[d]	0.5	1	0.12–>4	99.5
	Tigecycline	0.25	0.5	0.06–4	99.6

	Levofloxacin	>4	>4	≤0.03–>4	9.7
Klebsiella pneumoniae (1,003)	Ceftazidime-avibactam	0.5	2	≤0.015–>128	99.0
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	6.9
	Aztreonam	128	>128	0.25–>128	1.6
	Piperacillin-tazobactam	128	>128	0.5–>128	31.3
	Doripenem	0.12	>4	0.015–>4	72.7
	Imipenem	0.25	>8	0.06–>8	76.2
	Meropenem	0.06	>8	0.015–>8	68.7
	Amikacin	4	>32	≤0.25–>32	82.0
	Colistin (n=628)[d]	1	4	0.25–>4	89.3
	Tigecycline	1	2	0.06–>8	94.1
	Levofloxacin	>4	>4	≤0.03–>4	35.5
Klebsiella pneumoniae, MBL-negative (994)	Ceftazidime-avibactam	0.5	2	≤0.015–>128	99.9
	Ceftazidime	64	>128	8–>128	0
	Cefepime	>16	>16	≤0.12–>16	6.9
	Aztreonam	128	>128	0.25–>128	1.3
	Piperacillin-tazobactam	128	>128	0.5–>128	31.6
	Doripenem	0.12	>4	0.015–>4	73.3
	Imipenem	0.25	>8	0.06–>8	76.9
	Meropenem	0.06	>8	0.015–>8	69.3
	Amikacin	4	>32	≤0.25–>32	82.2
	Colistin (n=619)[d]	1	4	0.25–>4	89.8
	Tigecycline	1	2	0.06–>8	94.3
	Levofloxacin	>4	>4	≤0.03–>4	35.3
Klebsiella oxytoca (41)[e]	Ceftazidime-avibactam	0.25	1	0.03–16	97.6
	Ceftazidime	64	>128	8–>128	0.0
	Cefepime	8	>16	≤0.12–>16	24.4
	Aztreonam	128	>128	16–>128	0
	Piperacillin-tazobactam	32	>128	2–>128	43.9
	Doripenem	0.06	2	0.03–>4	87.8
	Imipenem	0.25	4	0.06–>8	80.5
	Meropenem	0.06	4	0.03–>8	87.8
	Amikacin	8	32	0.5–>32	85.4
	Colistin (n=27)[d]	0.5	1	0.25–2	100
	Tigecycline	0.5	1	0.06–2	100
	Levofloxacin	1	>4	0.06–>4	70.7
Enterobacter spp. (285)[f]	Ceftazidime-avibactam	0.5	2	0.03–128	97.5
	Ceftazidime	64	>128	8–>128	0
	Cefepime	4	>16	≤0.12–>16	40.7
	Aztreonam	64	>128	0.06–>128	3.9
	Piperacillin-tazobactam	64	>128	1–>128	30.5
	Doripenem	0.12	0.5	0.015–>4	92.6
	Imipenem	0.5	2	0.06–>8	88.1
	Meropenem	0.12	0.5	0.015–>8	92.6
	Amikacin	2	32	≤0.25–>32	89.1
	Colistin (n=155)[d]	0.5	1	0.25–>4	97.4
	Tigecycline	1	2	0.12–8	94.4
	Levofloxacin	0.5	>4	≤0.03–>4	67.0
Enterobacter spp., MBL-negative (282)	Ceftazidime-avibactam	0.5	2	0.03–32	98.6
	Ceftazidime	64	>128	8–>128	0
	Cefepime	4	>16	≤0.12–>16	40.8
	Aztreonam	64	>128	0.06–>128	2.8
	Piperacillin-tazobactam	64	>128	1–>128	30.9
	Doripenem	0.12	0.5	0.015–>4	93.6
	Imipenem	0.5	2	0.06–>8	89.0
	Meropenem	0.12	0.5	0.015–>8	93.6
	Amikacin	2	32	≤0.25–>32	89.4
	Colistin (n=152)[d]	0.5	1	0.25–>4	97.4
	Tigecycline	1	2	0.12–8	94.3
	Levofloxacin	0.5	>4	≤0.03–>4	66.7

Citrobacter spp. (100)[g]	Ceftazidime-avibactam	0.25	0.5	0.03–128	98.0
	Ceftazidime	64	>128	8–>128	0
	Cefepime	2	>16	≤0.12–>16	57.0
	Aztreonam	32	128	0.06–>128	6.0
	Piperacillin-tazobactam	32	>128	2–>128	44.0
	Doripenem	0.06	0.25	0.03–>4	95.0
	Imipenem	0.5	2	0.12–>8	85.0
	Meropenem	0.06	0.12	0.015–>8	94.0
	Amikacin	2	>32	0.5–>32	84.0
	Colistin (n=52)[d]	0.5	1	0.25–2	100
	Tigecycline	0.5	2	0.06–4	98.0
	Levofloxacin	0.5	>4	≤0.03–>4	68.0
Citrobacter spp., MBL-negative (99)	Ceftazidime-avibactam	0.25	0.5	0.03–128	99.0
	Ceftazidime	64	>128	8–>128	0
	Cefepime	2	>16	≤0.12–>16	57.6
	Aztreonam	32	>128	0.06–>128	6.1
	Piperacillin-tazobactam	32	>128	2–>128	44.4
	Doripenem	0.06	0.25	0.03–>4	96.0
	Imipenem	0.5	2	0.12–>8	85.9
	Meropenem	0.06	0.12	0.015–>8	95.0
	Amikacin	2	>32	0.5–>32	83.8
	Colistin (n=51)[d]	0.5	1	0.25–2	100
	Tigecycline	0.5	2	0.06–4	98.0
	Levofloxacin	0.5	>4	≤0.03–>4	68.7
Proteeae (60)[h]	Ceftazidime-avibactam	0.06	0.5	0.03–64	98.3
	Ceftazidime	16	64	8–>128	0
	Cefepime	0.5	>16	≤0.12–>16	75.0
	Aztreonam	2	16	0.06–>128	76.7
	Piperacillin-tazobactam	1	8	≤0.25–>128	93.3
	Doripenem	0.25	0.5	0.06–>4	98.3
	Imipenem	2	4	0.25–>8	10.0
	Meropenem	0.12	0.25	0.06–8	98.3
	Amikacin	4	32	0.5–>32	76.7
	Colistin (n=38)[d]	>4	>4	1–>4	2.6
	Tigecycline	2	4	≤0.015–>8	53.3
	Levofloxacin	4	>4	≤0.03–>4	46.7
Proteeae, MBL-negative (59)	Ceftazidime-avibactam	0.06	0.5	0.03–8	100
	Ceftazidime	16	64	8–>128	0
	Cefepime	0.5	>16	≤0.12–>16	76.3
	Aztreonam	2	16	0.12–>128	76.3
	Piperacillin-tazobactam	1	8	≤0.25–>128	94.9
	Doripenem	0.25	0.5	0.06–1	100
	Imipenem	2	4	0.25–4	10.2
	Meropenem	0.12	0.25	0.06–0.25	100
	Amikacin	4	>32	0.5–>32	76.3
	Colistin (n=38)[d]	>4	>4	1–>4	2.6
	Tigecycline	2	4	≤0.015–>8	54.2
	Levofloxacin	4	>4	≤0.03–>4	45.8
Other *Enterobacteriaceae* (35)[e,i]	Ceftazidime-avibactam	0.5	1	0.25–>128	97.1
	Ceftazidime	32	>128	8–>128	0
	Cefepime	16	>16	≤0.12–>16	20.0
	Aztreonam	64	>128	16–>128	0
	Piperacillin-tazobactam	16	>128	0.5–>128	57.1
	Doripenem	0.12	>4	0.06–>4	88.6
	Imipenem	1	>8	0.12–>8	85.7
	Meropenem	0.12	>8	0.06–>8	88.6
	Amikacin	8	>32	2–>32	68.6
	Colistin (n=24)[d]	>4	>4	0.25–>4	45.8
	Tigecycline	1	2	0.25–8	91.4
	Levofloxacin	2	>4	0.12–>4	65.7

Pseudomonas aeruginosa (538)	Ceftazidime-avibactam	8	64	0.12–>128	58.0
	Ceftazidime	64	>128	16–>128	0
	Cefepime	16	>16	0.25–>16	19.0
	Aztreonam	32	>128	2–>128	9.3
	Piperacillin-tazobactam	128	>128	4–>128	6.0
	Doripenem	>4	>4	0.03–>4	27.0
	Imipenem	>8	>8	0.25–>8	23.8
	Meropenem	>8	>8	≤0.06–>8	26.6
	Amikacin	16	>32	0.5–>32	54.1
	Colistin (n=401)[d]	2	2	0.5–8	95.0
	Levofloxacin	>4	>4	0.06–>4	30.5
Pseudomonas aeruginosa, MBL-negative (431)	Ceftazidime-avibactam	8	32	0.12–>128	71.7
	Ceftazidime	64	>128	16–>128	0
	Cefepime	16	>16	0.25–>16	21.8
	Aztreonam	32	>128	4–>128	6.5
	Piperacillin-tazobactam	>128	>128	4–>128	6.0
	Doripenem	>4	>4	0.03–>4	33.0
	Imipenem	>8	>8	0.25–>8	29.7
	Meropenem	8	>8	≤0.06–>8	32.3
	Amikacin	8	>32	0.5–>32	64.5
	Colistin (n=316)[d]	2	2	0.5–8	94.9
	Levofloxacin	>4	>4	0.06–>4	35.0

[a] MBL-negative, no gene encoding a metallo-β-lactamase was detected by polymerase chain reaction assay.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only.

[e] All isolates were MBL-negative.

[f] *Enterobacter* spp. included *Enterobacter aerogenes* (n=66), *Enterobacter asburiae* (n=5), *Enterobacter cloacae* (n=209), *Enterobacter kobei* (n=4), and *Enterobacter ludwigii* (n=1).

[g] *Citrobacter* spp. included *Citrobacter amalonaticus* (n=1), *Citrobacter braakii* (n=8), *Citrobacter freundii* (n=87), and *Citrobacter koseri* (n=4).

[h] Proteeae included *Morganella morganii* (n=34), *Proteus mirabilis* (n=16), *Proteus vulgaris* (n=2), *Providencia rettgeri* (n=2), and *Providencia stuartii* (n=6).

[i] Other *Enterobacteriaceae* included *Raoultella ornithinolytica* (n=9) and *Serratia marcescens* (n=26).

Table S9. *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 1,032 isolates of meropenem non-susceptible *Enterobacteriaceae* and *P. aeruginosa* collected in the Latin America region as part of the INFORM global surveillance program in 2012-2015

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae (389)	Ceftazidime-avibactam	1	4	0.03–>128	95.4
	Ceftazidime	64	>128	0.12–>128	5.4
	Cefepime	>16	>16	≤0.12–>16	7.2
	Aztreonam	>128	>128	0.06–>128	4.1
	Piperacillin-tazobactam	>128	>128	1–>128	2.1
	Doripenem	4	>4	0.12–>4	13.9
	Imipenem	8	>8	0.06–>8	22.4
	Meropenem	8	>8	2–>8	0
	Amikacin	8	>32	0.5–>32	68.1
	Colistin (n=256)[d]	1	>4	0.25–>4	75.4
	Tigecycline	1	2	0.06–8	94.3
	Levofloxacin	>4	>4	≤0.03–>4	19.8
Enterobacteriaceae, MBL-negative (373)	Ceftazidime-avibactam	1	4	0.03–>128	99.5
	Ceftazidime	64	>128	0.12–>128	5.6
	Cefepime	>16	>16	≤0.12–>16	7.2
	Aztreonam	>128	>128	0.06–>128	2.4
	Piperacillin-tazobactam	>128	>128	1–>128	2.1
	Doripenem	4	>4	0.12–>4	14.5
	Imipenem	8	>8	0.06–>8	23.3
	Meropenem	8	>8	2–>8	0
	Amikacin	8	>32	0.5–>32	68.4
	Colistin (n=240)[d]	1	>4	0.25–>4	75.8
	Tigecycline	1	2	0.06–8	94.9
	Levofloxacin	>4	>4	≤0.03–>4	18.2
Escherichia coli (17)	Ceftazidime-avibactam	0.25	32	0.03–32	88.2
	Ceftazidime	32	>128	8–>128	0
	Cefepime	>16	>16	4–>16	0
	Aztreonam	128	>128	64–>128	0
	Piperacillin-tazobactam	>128	>128	128–>128	0
	Doripenem	2	>4	1–>4	23.5
	Imipenem	4	8	0.25–>8	23.5
	Meropenem	4	>8	2–>8	0
	Amikacin	16	>32	4–>32	70.6
	Colistin (n=10)[d]	0.5	1	0.25–1	100
	Tigecycline	0.25	0.5	0.12–0.5	100
	Levofloxacin	>4	>4	0.06–>4	17.7
Escherichia coli, MBL-negative (15)	Ceftazidime-avibactam	0.25	2	0.03–4	100
	Ceftazidime	16	>128	8–>128	0
	Cefepime	>16	>16	4–>16	0
	Aztreonam	>128	>128	64–>128	0
	Piperacillin-tazobactam	>128	>128	128–>128	0
	Doripenem	2	>4	1–>4	26.7
	Imipenem	4	8	0.25–>8	26.7
	Meropenem	4	>8	2–>8	0
	Amikacin	8	>32	4–>32	73.3
	Colistin (n=8)[d]	0.5	1	0.25–1	100
	Tigecycline	0.25	0.5	0.12–0.5	100
	Levofloxacin	>4	>4	0.06–>4	20.0

Klebsiella pneumoniae (326)	Ceftazidime-avibactam	1	4	0.03–>128	96.9
	Ceftazidime	64	>128	0.5–>128	3.7
	Cefepime	>16	>16	≤0.12–>16	5.2
	Aztreonam	>128	>128	0.25–>128	2.5
	Piperacillin-tazobactam	>128	>128	2–>128	1.2
	Doripenem	4	>4	0.5–>4	13.2
	Imipenem	8	>8	0.06–>8	25.5
	Meropenem	8	>8	2–>8	0
	Amikacin	8	>32	0.5–>32	65.6
	Colistin (n=211)[d]	1	>4	0.25–>4	73.0
	Tigecycline	1	2	0.06–8	94.2
	Levofloxacin	>4	>4	≤0.03–>4	13.2
Klebsiella pneumoniae, MBL-negative (317)	Ceftazidime-avibactam	1	4	0.03–>128	99.7
	Ceftazidime	64	>128	0.5–>128	3.8
	Cefepime	>16	>16	≤0.12–>16	5.4
	Aztreonam	>128	>128	0.25–>128	1.6
	Piperacillin-tazobactam	>128	>128	2–>128	1.3
	Doripenem	4	>4	0.5–>4	13.6
	Imipenem	8	>8	0.06–>8	26.2
	Meropenem	8	>8	2–>8	0
	Amikacin	8	>32	0.5–>32	65.9
	Colistin (n=202)[d]	1	>4	0.25–>4	73.8
	Tigecycline	1	2	0.06–8	94.6
	Levofloxacin	>4	>4	≤0.03–>4	12.0
Klebsiella oxytoca (8)[e]	Ceftazidime-avibactam	—[b]	—	0.06–16	87.5
	Ceftazidime	—	—	2–>128	37.5
	Cefepime	—	—	1–>16	25.0
	Aztreonam	—	—	16–>128	0
	Piperacillin-tazobactam	—	—	128–>128	0
	Doripenem	—	—	1–>4	25.0
	Imipenem	—	—	4–>8	0
	Meropenem	—	—	2–>8	0
	Amikacin	—	—	1–32	87.5
	Colistin (n=7)[d]	—	—	0.25–1	100
	Tigecycline	—	—	0.25–2	100
	Levofloxacin	—	—	0.06–>4	87.5
Enterobacter spp. (23)[f]	Ceftazidime-avibactam	1	16	0.06–128	87.0
	Ceftazidime	64	>128	0.12–>128	8.7
	Cefepime	16	>16	≤0.12–>16	26.1
	Aztreonam	64	>128	0.06–>128	21.7
	Piperacillin-tazobactam	128	>128	1–>128	13.0
	Doripenem	4	>4	0.12–>4	8.7
	Imipenem	8	>8	2–>8	0
	Meropenem	4	>8	2–>8	0
	Amikacin	4	16	1–32	91.3
	Colistin (n=16)[d]	1	1	0.5–>4	93.8
	Tigecycline	0.5	2	0.25–4	95.7
	Levofloxacin	1	>4	0.06–>4	65.2
Enterobacter spp., MBL-negative (20)	Ceftazidime-avibactam	1	2	0.06–4	100
	Ceftazidime	64	>128	0.12–>128	10.0
	Cefepime	16	>16	≤0.12–>16	25.0
	Aztreonam	64	>128	0.06–>128	10.0
	Piperacillin-tazobactam	128	>128	1–>128	15.0
	Doripenem	4	>4	0.12–>4	10.0
	Imipenem	8	>8	2–>8	0
	Meropenem	8	>8	2–>8	0
	Amikacin	4	8	1–32	95.0
	Colistin (n=13)[d]	1	1	0.5–>4	92.3
	Tigecycline	1	2	0.25–4	95.0
	Levofloxacin	1	>4	0.06–>4	60.0

Citrobacter spp. (8)[g]	Ceftazidime-avibactam	—[b]	—	0.06–64	87.5
	Ceftazidime	—	—	4–>128	25.0
	Cefepime	—	—	1–>16	25.0
	Aztreonam	—	—	16–>128	0
	Piperacillin-tazobactam	—	—	64–>128	0
	Doripenem	—	—	1–>4	37.5
	Imipenem	—	—	2–>8	0
	Meropenem	—	—	2–>8	0
	Amikacin	—	—	1–>32	75.0
	Colistin (n=6)[d]	—	—	0.25–1	100
	Tigecycline	—	—	0.25–2	100
	Levofloxacin	—	—	≤0.03–>4	37.5
Citrobacter spp., MBL-negative (7)	Ceftazidime-avibactam	—[b]	—	0.06–1	100
	Ceftazidime	—	—	4–>128	28.6
	Cefepime	—	—	1–>16	28.6
	Aztreonam	—	—	16–>128	0
	Piperacillin-tazobactam	—	—	64–>128	0
	Doripenem	—	—	1–>4	42.9
	Imipenem	—	—	2–>8	0
	Meropenem	—	—	2–>8	0
	Amikacin	—	—	1–>32	71.4
	Colistin (n=5)[d]	—	—	0.25–1	100
	Tigecycline	—	—	0.25–2	100
	Levofloxacin	—	—	≤0.03–>4	42.9
Proteeae (2)[h]	Ceftazidime-avibactam	—[b]	—	0.5–64	50.0
	Ceftazidime	—	—	4–64	50.0
	Cefepime	—	—	16–>16	0
	Aztreonam	—	—	0.06–4	100
	Piperacillin-tazobactam	—	—	4–>128	50.0
	Doripenem	—	—	2–>4	0
	Imipenem	—	—	4–>8	0
	Meropenem	—	—	2–8	0
	Amikacin	—	—	2–2	100
	Colistin (n=2)[d]	—	—	>4–>4	0
	Tigecycline	—	—	2–4	50.0
	Levofloxacin	—	—	2–>4	50.0
Proteeae, MBL-negative (1)	Ceftazidime-avibactam	—[b]	—	0.5	100
	Ceftazidime	—	—	4	100
	Cefepime	—	—	>16	0
	Aztreonam	—	—	4	100
	Piperacillin-tazobactam	—	—	4	100
	Doripenem	—	—	2	0
	Imipenem	—	—	4	0
	Meropenem	—	—	2	0
	Amikacin	—	—	2	100
	Colistin (n=1)[d]	—	—	>4	0
	Tigecycline	—	—	2	100
	Levofloxacin	—	—	>4	0
Other *Enterobacteriaceae* (5)[e,i]	Ceftazidime-avibactam	—[b]	—	0.5–1	100
	Ceftazidime	—	—	2–>128	20.0
	Cefepime	—	—	1–>16	20.0
	Aztreonam	—	—	4–>128	20.0
	Piperacillin-tazobactam	—	—	64–>128	0
	Doripenem	—	—	2–>4	0
	Imipenem	—	—	>8–>8	0
	Meropenem	—	—	2–>8	0
	Amikacin	—	—	2–>32	60.0
	Colistin (n=4)[d]	—	—	2–>4	25.0
	Tigecycline	—	—	0.5–4	80.0
	Levofloxacin	—	—	0.12–2	100

Pseudomonas aeruginosa (643)	Ceftazidime-avibactam	8	64	0.5–>128	67.5
	Ceftazidime	32	>128	1–>128	38.6
	Cefepime	16	>16	0.25–>16	38.6
	Aztreonam	32	>128	1–>128	19.6
	Piperacillin-tazobactam	64	>128	2–>128	27.5
	Doripenem	>4	>4	0.5–>4	6.8
	Imipenem	>8	>8	1–>8	5.9
	Meropenem	>8	>8	4–>8	0
	Amikacin	16	>32	0.5–>32	56.6
	Colistin (n=486)[d]	2	2	0.25–8	95.1
	Levofloxacin	>4	>4	0.25–>4	29.7
Pseudomonas aeruginosa, MBL-negative (537)	Ceftazidime-avibactam	4	32	0.5–>128	79.7
	Ceftazidime	16	>128	1–>128	45.6
	Cefepime	16	>16	0.25–>16	44.3
	Aztreonam	32	>128	1–>128	19.2
	Piperacillin-tazobactam	64	>128	2–>128	31.5
	Doripenem	>4	>4	0.5–>4	8.2
	Imipenem	>8	>8	1–>8	7.1
	Meropenem	>8	>8	4–>8	0
	Amikacin	8	>32	0.5–>32	65.0
	Colistin (n=399)[d]	2	2	0.25–8	95.0
	Levofloxacin	>4	>4	0.25–>4	33.0

[a] MBL-negative, no gene encoding a metallo-β-lactamase was detected by polymerase chain reaction assay.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only.

[e] All isolates were MBL-negative.

[f] *Enterobacter* spp. included *Enterobacter aerogenes* (n=7), *Enterobacter asburiae* (n=1), and *Enterobacter cloacae* (n=15).

[g] *Citrobacter* spp. included *Citrobacter freundii* (n=7) and *Citrobacter koseri* (n=1).

[h] Proteeae included *Providencia rettgeri* (n=1) and *Providencia stuartii* (n=1).

[i] Other *Enterobacteriaceae* included *Raoultella ornithinolytica* (n=1) and *Serratia marcescens* (n=4).

Table S10. *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 126 isolates of colistin-resistant *Enterobacteriaceae* and *P. aeruginosa* collected in the Latin America region as part of the INFORM global surveillance program in 2012-2015

Organism, phenotype (no. of isolates)[a]	Antimicrobial agent	MIC (μg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae (124)[d]	Ceftazidime-avibactam	0.5	2	0.03–>128	96.0
	Ceftazidime	32	>128	0.12–>128	41.1
	Cefepime	16	>16	≤0.12–>16	43.6
	Aztreonam	64	>128	0.03–>128	43.6
	Piperacillin-tazobactam	32	>128	0.5–>128	46.8
	Doripenem	0.25	>4	≤0.008–>4	56.5
	Imipenem	1	>8	0.12–>8	61.3
	Meropenem	0.12	>8	0.03–>8	53.2
	Amikacin	4	>32	0.5–>32	68.6
	Colistin (n=124)[e]	>4	>4	4–>4	0
	Tigecycline	1	2	0.12–4	93.6
	Levofloxacin	>4	>4	≤0.03–>4	37.9
Enterobacteriaceae, MBL-negative (120)	Ceftazidime-avibactam	0.5	2	0.03–>128	99.2
	Ceftazidime	32	>128	0.12–>128	42.5
	Cefepime	16	>16	≤0.12–>16	45.0
	Aztreonam	64	>128	0.03–>128	42.5
	Piperacillin-tazobactam	32	>128	0.5–>128	48.3
	Doripenem	0.12	>4	≤0.008–>4	58.3
	Imipenem	1	>8	0.12–>8	63.3
	Meropenem	0.12	>8	0.03–>8	55.0
	Amikacin	4	>32	0.5–>32	70.8
	Colistin (n=120)[e]	>4	>4	4–>4	0
	Tigecycline	1	2	0.12–4	94.2
	Levofloxacin	>4	>4	≤0.03–>4	37.5
Escherichia coli (12)[f]	Ceftazidime-avibactam	—[b]	—	0.12–0.25	100
	Ceftazidime	—	—	0.12–32	75.0
	Cefepime	—	—	≤0.12–>16	75.0
	Aztreonam	—	—	0.06–32	75.0
	Piperacillin-tazobactam	—	—	2–32	87.5
	Doripenem	—	—	≤0.008–0.06	100
	Imipenem	—	—	0.12–0.25	100
	Meropenem	—	—	0.03–0.06	100
	Amikacin	—	—	2–8	100
	Colistin (n=8)[e]	—	—	4–>4	0
	Tigecycline	—	—	0.12–0.5	100
	Levofloxacin	—	—	≤0.03–>4	37.5
Klebsiella pneumoniae (82)	Ceftazidime-avibactam	1	4	0.03–>128	93.9
	Ceftazidime	64	>128	0.12–>128	18.3
	Cefepime	>16	>16	≤0.12–>16	18.3
	Aztreonam	128	>128	0.06–>128	20.7
	Piperacillin-tazobactam	>128	>128	2–>128	22.0
	Doripenem	4	>4	0.03–>4	35.4
	Imipenem	1	>8	0.12–>8	50.0
	Meropenem	4	>8	0.03–>8	30.5
	Amikacin	16	>32	0.5–>32	52.4
	Colistin (n=82)[e]	>4	>4	4–>4	0
	Tigecycline	1	2	0.25–4	90.2
	Levofloxacin	>4	>4	0.06–>4	12.2
Klebsiella pneumoniae, MBL-negative (78)	Ceftazidime-avibactam	1	2	0.03–>128	98.7
	Ceftazidime	64	>128	0.12–>128	19.2

	Cefepime	>16	>16	≤0.12–>16	19.2
	Aztreonam	128	>128	0.06–>128	18.0
	Piperacillin-tazobactam	>128	>128	2–>128	23.1
	Doripenem	2	>4	0.03–>4	37.2
	Imipenem	1	>8	0.12–>8	52.6
	Meropenem	4	>8	0.03–>8	32.1
	Amikacin	16	>32	0.5–>32	55.1
	Colistin (n=78)[e]	>4	>4	4–>4	0
	Tigecycline	1	2	0.25–4	91.0
	Levofloxacin	>4	>4	0.06–>4	10.3
Klebsiella oxytoca (2)[f]	Ceftazidime-avibactam	—[b]	—	0.12–0.12	100
	Ceftazidime	—	—	0.25–0.25	100
	Cefepime	—	—	≤0.12–0.25	100
	Aztreonam	—	—	0.12–0.25	100
	Piperacillin-tazobactam	—	—	2–4	100
	Doripenem	—	—	0.06–0.06	100
	Imipenem	—	—	0.25–0.25	100
	Meropenem	—	—	0.03–0.06	100
	Amikacin	—	—	2–2	100
	Colistin (n=2)[e]	—	—	4–4	0
	Tigecycline	—	—	0.5–0.5	100
	Levofloxacin	—	—	0.06–2	100
Enterobacter spp. (32)[f,g]	Ceftazidime-avibactam	0.12	0.5	0.06–1	100
	Ceftazidime	0.25	8	0.12–128	87.5
	Cefepime	≤0.12	0.25	≤0.12–>16	96.9
	Aztreonam	0.12	2	0.03–64	90.6
	Piperacillin-tazobactam	4	16	0.5–128	96.9
	Doripenem	0.06	0.12	0.03–>4	96.9
	Imipenem	1	2	0.5–>8	78.1
	Meropenem	0.06	0.12	0.03–>8	96.9
	Amikacin	2	4	1–4	100
	Colistin (n=32)[e]	>4	>4	4–>4	0
	Tigecycline	0.5	1	0.25–1	100
	Levofloxacin	0.06	0.12	≤0.03–2	100
Pseudomonas aeruginosa (2)[f]	Ceftazidime-avibactam	—[b]	—	2–4	100
	Ceftazidime	—	—	2–16	50.0
	Cefepime	—	—	2–>16	50.0
	Aztreonam	—	—	8–16	50.0
	Piperacillin-tazobactam	—	—	4–>128	50.0
	Doripenem	—	—	0.5–2	100
	Imipenem	—	—	1–2	100
	Meropenem	—	—	0.25–8	50.0
	Amikacin	—	—	4–>32	50.0
	Colistin (n=2)[e]	—	—	8–8	0
	Levofloxacin	—	—	0.5–>4	50.0

[a] MBL-negative, no gene encoding a metallo-β-lactamase was detected by polymerase chain reaction assay.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Excludes isolates of Proteeae and *Serratia* spp., which are intrinsically resistant to colistin.

[e] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only.

[f] All isolates were MBL-negative.

[g] *Enterobacter* spp. included *Enterobacter asburiae* (n=15) and *Enterobacter cloacae* (n=17).

Table S11. *In vitro* activities of ceftazidime-avibactam and comparator antimicrobial agents tested against 2,050 isolates of multidrug-resistant *Enterobacteriaceae* and *P. aeruginosa* collected in the Latin America region as part of the INFORM global surveillance program in 2012-2015

Organism, genotype (no. of isolates)[a]	Antimicrobial agent	MIC (µg/ml)[b]			% Susceptible[c]
		MIC_{50}	MIC_{90}	Range	
Enterobacteriaceae (1,596)	Ceftazidime-avibactam	0.5	2	≤0.015–>128	98.8
	Ceftazidime	64	>128	0.12–>128	6.9
	Cefepime	>16	>16	≤0.12–>16	2.6
	Aztreonam	64	>128	≤0.015–>128	2.8
	Piperacillin-tazobactam	64	>128	≤0.25–>128	41.7
	Doripenem	0.06	>4	0.015–>4	79.7
	Imipenem	0.25	8	0.06–>8	78.1
	Meropenem	0.06	>8	0.015–>8	77.1
	Amikacin	8	>32	≤0.25–>32	80.6
	Colistin (n=947)[d]	1	>4	≤0.12–>4	85.7
	Tigecycline	0.5	2	≤0.015–>8	92.9
	Levofloxacin	>4	>4	≤0.03–>4	9.0
Enterobacteriaceae, MBL-negative (1,582)	Ceftazidime-avibactam	0.25	2	≤0.015–>128	99.6
	Ceftazidime	64	>128	0.12–>128	7.0
	Cefepime	>16	>16	≤0.12–>16	2.7
	Aztreonam	64	>128	≤0.015–>128	2.5
	Piperacillin-tazobactam	32	>128	≤0.25–>128	42.0
	Doripenem	0.06	>4	0.015–>4	80.4
	Imipenem	0.25	8	0.06–>8	78.8
	Meropenem	0.06	>8	0.015–>8	77.8
	Amikacin	8	>32	≤0.25–>32	80.8
	Colistin (n=933)[d]	0.5	>4	≤0.12–>4	86.1
	Tigecycline	0.5	2	≤0.015–>8	93.1
	Levofloxacin	>4	>4	≤0.03–>4	8.7
Escherichia coli (676)	Ceftazidime-avibactam	0.25	0.5	≤0.015–32	99.7
	Ceftazidime	32	128	0.12–>128	4.4
	Cefepime	>16	>16	0.5–>16	0.3
	Aztreonam	64	128	0.12–>128	0.6
	Piperacillin-tazobactam	16	128	0.5–>128	72.9
	Doripenem	0.03	0.06	0.015–>4	98.1
	Imipenem	0.25	0.25	0.06–>8	97.8
	Meropenem	0.03	0.06	0.015–>8	97.5
	Amikacin	8	16	0.5–>32	90.8
	Colistin (n=379)[d]	0.5	1	≤0.12–>4	99.5
	Tigecycline	0.25	0.5	≤0.015–4	99.7
	Levofloxacin	>4	>4	≤0.03–>4	1.8
Escherichia coli, MBL-negative (674)	Ceftazidime-avibactam	0.25	0.5	≤0.015–8	100
	Ceftazidime	32	128	0.12–>128	4.5
	Cefepime	>16	>16	0.5–>16	0.3
	Aztreonam	64	128	0.12–>128	0.6
	Piperacillin-tazobactam	16	128	0.5–>128	73.2
	Doripenem	0.03	0.06	0.015–>4	98.4
	Imipenem	0.25	0.25	0.06–>8	98.1
	Meropenem	0.03	0.06	0.015–>8	97.8
	Amikacin	8	16	0.5–>32	91.0
	Colistin (n=377)[d]	0.5	1	0.12–>4	99.5
	Tigecycline	0.25	0.5	≤0.015–4	99.7
	Levofloxacin	>4	>4	≤0.03–>4	1.8

Klebsiella pneumoniae (674)	Ceftazidime-avibactam	0.5	2	≤0.015–>128	98.5
	Ceftazidime	64	>128	0.5–>128	2.1
	Cefepime	>16	>16	≤0.12–>16	3.1
	Aztreonam	128	>128	0.12–>128	1.5
	Piperacillin-tazobactam	>128	>128	1–>128	11.3
	Doripenem	0.5	>4	0.015–>4	59.1
	Imipenem	0.5	>8	0.06–>8	64.8
	Meropenem	0.5	>8	0.015–>8	53.6
	Amikacin	4	>32	≤0.25–>32	73.6
	Colistin (n=420)[d]	1	>4	0.25–>4	82.6
	Tigecycline	1	2	0.06–>8	92.0
	Levofloxacin	>4	>4	0.06–>4	10.1
Klebsiella pneumoniae, MBL-negative (665)	Ceftazidime-avibactam	0.5	2	≤0.015–>128	99.9
	Ceftazidime	64	>128	0.5–>128	2.1
	Cefepime	>16	>16	≤0.12–>16	3.2
	Aztreonam	128	>128	0.12–>128	1.1
	Piperacillin-tazobactam	>128	>128	1–>128	11.4
	Doripenem	0.25	>4	0.015–>4	59.9
	Imipenem	0.5	>8	0.06–>8	65.7
	Meropenem	0.5	>8	0.015–>8	54.3
	Amikacin	4	>32	≤0.25–>32	73.8
	Colistin (n=411)[d]	1	>4	0.25–>4	83.2
	Tigecycline	1	2	0.06–>8	92.2
	Levofloxacin	>4	>4	0.06–>4	9.5
Klebsiella oxytoca (20)[e]	Ceftazidime-avibactam	0.5	1	0.03–16	95.0
	Ceftazidime	32	>128	1–>128	25.0
	Cefepime	16	>16	1–>16	20.0
	Aztreonam	128	>128	16–>128	0
	Piperacillin-tazobactam	>128	>128	8–>128	5.0
	Doripenem	0.12	>4	0.03–>4	75.0
	Imipenem	0.5	8	0.12–>8	65.0
	Meropenem	0.06	>8	0.03–>8	70.0
	Amikacin	8	32	1–>32	80.0
	Colistin (n=14)[d]	0.5	1	0.25–2	100
	Tigecycline	1	2	0.25–2	100
	Levofloxacin	2	>4	0.06–>4	50.0
Enterobacter spp. (106)[f]	Ceftazidime-avibactam	1	4	0.06–128	95.3
	Ceftazidime	128	>128	2–>128	1.9
	Cefepime	>16	>16	≤0.12–>16	4.7
	Aztreonam	128	>128	0.12–>128	0.9
	Piperacillin-tazobactam	>128	>128	4–>128	16.0
	Doripenem	0.25	4	0.03–>4	84.0
	Imipenem	0.5	8	0.06–>8	81.1
	Meropenem	0.12	4	0.015–>8	84.9
	Amikacin	4	32	0.5–>32	76.4
	Colistin (n=55)[d]	0.5	1	0.25–>4	96.4
	Tigecycline	1	4	0.25–8	88.7
	Levofloxacin	>4	>4	0.06–>4	24.5
Enterobacter spp., MBL-negative (105)	Ceftazidime-avibactam	1	4	0.06–32	96.2
	Ceftazidime	128	>128	2–>128	1.9
	Cefepime	>16	>16	≤0.12–>16	4.8
	Aztreonam	128	>128	16–>128	0
	Piperacillin-tazobactam	>128	>128	4–>128	16.2
	Doripenem	0.25	4	0.03–>4	84.8
	Imipenem	0.5	8	0.06–>8	81.9
	Meropenem	0.12	4	0.015–>8	85.7
	Amikacin	4	32	0.5–>32	77.1
	Colistin (n=54)[d]	0.5	1	0.25–>4	96.3
	Tigecycline	2	4	0.25–8	88.6
	Levofloxacin	>4	>4	0.06–>4	23.8

Citrobacter spp. (28)[g]	Ceftazidime-avibactam	0.5	1	0.03–64	96.4
	Ceftazidime	64	>128	4–>128	14.3
	Cefepime	>16	>16	1–>16	14.3
	Aztreonam	64	>128	16–>128	0
	Piperacillin-tazobactam	128	>128	2–>128	25.0
	Doripenem	0.12	>4	0.03–>4	82.1
	Imipenem	1	8	0.12–>8	67.9
	Meropenem	0.06	8	0.03–>8	75.0
	Amikacin	8	>32	1–>32	60.7
	Colistin (n=13)[d]	1	1	0.25–1	100
	Tigecycline	0.5	2	0.25–4	96.4
	Levofloxacin	>4	>4	≤0.03–>4	28.6
Citrobacter spp., MBL-negative (27)	Ceftazidime-avibactam	0.5	1	0.03–4	100
	Ceftazidime	64	>128	4–>128	14.8
	Cefepime	>16	>16	1–>16	14.8
	Aztreonam	64	>128	16–>128	0
	Piperacillin-tazobactam	128	>128	2–>128	25.9
	Doripenem	0.12	4	0.03–>4	85.2
	Imipenem	1	8	0.12–>8	70.4
	Meropenem	0.06	8	0.03–>8	77.8
	Amikacin	8	>32	1–>32	59.3
	Colistin (n=12)[d]	0.5	1	0.25–1	100
	Tigecycline	0.5	2	0.25–4	96.3
	Levofloxacin	>4	>4	0.03–>4	29.6
Proteeae (64)[h]	Ceftazidime-avibactam	0.06	0.25	≤0.015–64	98.4
	Ceftazidime	2	16	0.12–>128	81.3
	Cefepime	>16	>16	0.25–>16	6.3
	Aztreonam	8	64	≤0.015–>128	45.3
	Piperacillin-tazobactam	1	32	≤0.25–>128	89.1
	Doripenem	0.25	1	0.06–>4	93.8
	Imipenem	4	4	0.25–>8	12.5
	Meropenem	0.12	0.25	0.06–8	96.9
	Amikacin	8	>32	0.5–>32	73.4
	Colistin (n=44)[d]	>4	>4	>4–>4	0
	Tigecycline	4	8	0.25–>8	35.9
	Levofloxacin	>4	>4	0.12–>4	6.3
Proteeae, MBL-negative (63)	Ceftazidime-avibactam	0.06	0.25	≤0.015–2	100
	Ceftazidime	2	16	0.12–>128	82.5
	Cefepime	>16	>16	0.25–>16	6.3
	Aztreonam	8	64	≤0.015–>128	44.4
	Piperacillin-tazobactam	1	8	≤0.25–>128	90.5
	Doripenem	0.25	1	0.06–4	95.2
	Imipenem	4	4	0.25–8	12.7
	Meropenem	0.12	0.25	0.06–2	98.4
	Amikacin	8	>32	0.5–>32	73.0
	Colistin (n=43)[d]	>4	>4	>4–>4	0
	Tigecycline	4	8	0.25–>8	36.5
	Levofloxacin	>4	>4	0.12–>4	4.8
Other *Enterobacteriaceae* (28)[e,i]	Ceftazidime-avibactam	0.5	1	0.25–4	100
	Ceftazidime	32	>128	1–>128	10.7
	Cefepime	>16	>16	0.25–>16	7.1
	Aztreonam	64	>128	16–>128	0
	Piperacillin-tazobactam	32	>128	0.5–>128	50.0
	Doripenem	0.12	>4	0.06–>4	85.7
	Imipenem	1	>8	0.12–>8	82.1
	Meropenem	0.12	>8	0.06–>8	85.7
	Amikacin	16	>32	2–>32	53.6
	Colistin (n=22)[d]	>4	>4	0.5–>4	36.4
	Tigecycline	1	4	0.25–8	89.3
	Levofloxacin	2	>4	0.12–>4	57.1

Pseudomonas aeruginosa (454)	Ceftazidime-avibactam	8	64	0.5–>128	57.1
	Ceftazidime	64	>128	2–>128	17.6
	Cefepime	>16	>16	0.25–>16	12.8
	Aztreonam	32	>128	2–>128	6.4
	Piperacillin-tazobactam	>128	>128	2–>128	9.0
	Doripenem	>4	>4	0.12–>4	9.3
	Imipenem	>8	>8	1–>8	12.3
	Meropenem	>8	>8	≤0.06–>8	8.2
	Amikacin	>32	>32	0.5–>32	41.9
	Colistin (n=336)[d]	2	2	0.25–8	94.9
	Levofloxacin	>4	>4	0.25–>4	11.0
Pseudomonas aeruginosa, MBL-negative (368)	Ceftazidime-avibactam	8	32	0.5–>128	69.8
	Ceftazidime	64	>128	2–>128	21.7
	Cefepime	>16	>16	0.25–>16	15.2
	Aztreonam	64	>128	4–>128	4.4
	Piperacillin-tazobactam	>128	>128	2–>128	10.3
	Doripenem	>4	>4	0.12–>4	11.4
	Imipenem	>8	>8	1–>8	15.2
	Meropenem	>8	>8	≤0.06–>8	10.1
	Amikacin	16	>32	0.5–>32	50.0
	Colistin (n=266)[d]	2	2	0.25–8	94.7
	Levofloxacin	>4	>4	0.25–>4	11.4

[a] MBL-negative, no gene encoding a metallo-β-lactamase was detected by polymerase chain reaction assay.

[b] —, MIC_{50} and MIC_{90} were not calculated for n <10 isolates.

[c] % Susceptibility was determined according to CLSI 2016 breakpoints with the exception of ceftazidime-avibactam and tigecycline where US FDA breakpoints were applied and colistin where EUCAST breakpoints were applied.

[d] Values are for colistin tested without 0.002% polysorbate-80; isolates collected in 2014-2015 only.

[e] All isolates were MBL-negative.

[f] *Enterobacter* spp. included *Enterobacter aerogenes* (n=11), *Enterobacter cloacae* (n=92), and *Enterobacter kobei* (n=3).

[g] *Citrobacter* spp. included *Citrobacter braakii* (n=1), *Citrobacter freundii* (n=26), and *Citrobacter koseri* (n=1).

[h] Proteeae included *Morganella morganii* (n=10), *Proteus mirabilis* (n=48), *Providencia rettgeri* (n=2), and *Providencia stuartii* (n=4).

[i] Other *Enterobacteriaceae* included *Raoultella ornithinolytica* (n=7) and *Serratia marcescens* (n=21).