

**P1877 *In vitro* activity of tigecycline and comparator agents against Gram-negative and Gram-positive isolates from China in 2015-2017**Daryl Hoban<sup>1</sup>, Meredith Hackel\*<sup>1</sup>, Dan Sahn<sup>1</sup>, Michael Dowzicky<sup>2</sup>, Patricia A. Hogan<sup>2</sup><sup>1</sup> IHMA, Inc., Schaumburg, United States, <sup>2</sup> Pfizer, Inc., Collegeville, United States

**Background:** Antimicrobial resistance is an increasingly serious threat to global public health. The Tigecycline Evaluation Surveillance Trial (TEST) monitors the activity of tigecycline and comparators against multiple pathogens from various infection sources collected worldwide. In this analysis, data from the TEST program were used to measure the *in vitro* activity of several key gram-negative/gram-positive agents against major pathogens from China.

**Materials/methods:** A total of 1,432 gram-negative and 556 gram-positive isolates were collected from multiple infection sources from 16 sites in China during 2015-2017. Isolates were identified to the species level and MICs determined at each participating laboratory using supplied broth microdilution panels and following CLSI guidelines. Only one clinically relevant causative isolate per patient was accepted into the study. Phenotypic ESBL screening and confirmatory testing were performed using the CLSI M100 method (26th edition, 2016). All data were submitted to International Health Management Associates, Inc. (IHMA) for analysis using EUCAST breakpoint criteria.

**Results:** The *in vitro* activities of selected antimicrobial agents are provided in the table below. Overall CRE rate in China among Enterobacteriaceae isolates was 7.9%. Based on percent susceptibility, meropenem, amikacin, and tigecycline were the most active agents against the majority of isolates, including ESBL and CRE subpopulations. Cefepime, levofloxacin and piperacillin/tazobactam had reduced activity against all Enterobacteriaceae and reduced activity against the CRE subset. Tigecycline exhibited excellent activity against gram-positive pathogens examined.

Organism (n)	%S							
	TGC	AMK	FEP	CAZ	CRO	LVX	MEM	TZP
<b>Gram negative</b>								
<i>Enterobacteriaceae</i> (1209)	87.9	91.5	54.7	53.1	47.6	57.1	92.1	77.0
<i>Enterobacteriaceae</i> , ESBL+ (99)	93.9	96.0	9.1	29.3	1.0	33.3	100	89.9
CRE (96)	62.5	39.6	1.0	0	1.0	5.2	0	4.2
<i>Acinetobacter</i> spp. (223)	na*	25.1	na	na	na	18.8	20.6	na
<b>Gram positive</b>								
<i>Enterococcus</i> spp. (204)	100	52.5	51.5	42.7	99.0	97.1		
<i>Staphylococcus aureus</i> (352)	100	na	na	57.7	100	100		

ESBL+, extended-spectrum  $\beta$ -lactamase positive; CRE, carbapenem-resistant Enterobacteriaceae (meropenem MIC >2 mg/L, MIC<sub>90</sub> in mg/L; na, no breakpoint; TGC, tigecycline; AMK, amikacin; FEP, cefepime; CAZ, ceftazidime; CRO, ceftriaxone; LVX, levofloxacin; MEM, meropenem; TZP, piperacillin-tazobactam; AMC, amoxicillin-clavulanate; AMP, ampicillin; LNZ, linezolid; VAN, vancomycin  
\* no breakpoint available, MIC<sub>90</sub> = 2 mg/L

**Conclusions:** The most active agents tested against Enterobacteriaceae from China, including ESBL-positive isolates were Tigecycline, meropenem, and amikacin. Tigecycline, linezolid and vancomycin all exhibited excellent activity against gram-positive isolates, with >97% susceptible. Country specific monitoring of susceptibility patterns among common pathogens provides useful information for determining treatment strategies.

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