

Session: P057 Focus *Pseudomonas aeruginosa* and novel agents against non-fermenters

**Category: 3b. Resistance surveillance & epidemiology: Gram-negatives**

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**Analysis of activities of piperacillin-tazobactam and comparators against *Pseudomonas aeruginosa* from Europe: TEST data 2013-2016**

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**Background:** Infections with *P. aeruginosa* present major problems in hospitals due to their frequency, high morbidity and mortality rate, prolongation of hospital stay and escalating antimicrobial resistance with attendant additional costs. Monitoring of antimicrobial resistance is necessary for effective empiric and directed therapy. Susceptibility data from The Tigecycline European Surveillance Trial (TEST) program was evaluated to monitor the activity of piperacillin-tazobactam and comparative antimicrobial agents against *P. aeruginosa* isolated from multiple infection sources in patients in nine European countries since 2013.

**Material/methods:** Hospital sites in nine European countries collected 5668 *P. aeruginosa* isolates from multiple infection sites 2013-2016. MICs were determined locally using supplied micro-broth panels following CLSI guidelines and categorical results were interpreted using current EUCAST guidelines.

**Results:** The *in vitro* activity of piperacillin-tazobactam and comparators against *P. aeruginosa* isolates are shown below.

Country	AMK	FEP	CAZ	CRO	LVX	MEM	TZP
Spain (1359)	92.1/8	75.5/16	81.3/> 16	na/> 32	56.4/> 8	67.9/16	78.9/64
Italy (1192)	86.8/16	69.9/32	76.2/> 16	na/> 32	56.0/> 8	66.4/16	72.2/128
Germany (1070)	94.9/8	83.7/16	87.8/16	na/> 32	65.2/> 8	71.9/16	84.4/64

France (768)	91.2/8	78.3/16	78.7/> 16	na/> 32	65.1/> 8	74.1/16	77.7/128
Belgium (483)	90.1/8	78.5/16	79.0/> 16	na/> 32	65.0/> 8	72.9/16	81.4/64
Portugal (279)	90.3/8	74.2/16	70.1/> 16	na/> 32	49.1/> 8	62.7/> 16	71.0/128
Switzerland (197)	96.5/4	87.3/16	92.3/8	na/> 32	80.7/4	85.8/4	89.3/32
United Kingdom (188)	95.2/8	84.0/16	86.6/16	na/> 32	79.8/4	83.0/8	84.6/32
Ireland (132)	88.6/16	72.0/32	70.8/> 16	na/> 32	60.6/> 8	65.2/16	78.0/64

AK=Amikacin, FEP=Cefepime, CAZ=Ceftazidime, CRO=Ceftriaxone, LVX=Levofloxacin, MEM=Meropenem, TZP=Piperacillin-Tazobactam

**Conclusions:** Against *P. aeruginosa* TZP was more active than MEM and had comparable activity to CAZ and FEP but lower activity than AMK. The propensity of these organisms to develop resistance to any anti-pseudomonal agent underscores the need for continuous and careful surveillance.