**ABSTRACT**

**Background:** Plazomicin (PLZ) is a new-generation aminoglycoside (AG) that overcomes current AG resistance mechanisms, including aminoglycoside modifying enzymes (AME), aminoglycoside nucleotide analogues (ANA), and emerging aminoglycoside-resistant mutants (ARM) associated with extended-spectrum β-lactamases (ESBLs) and carbapenemases (CBPs). PLZ has completed Phase 3 clinical trials for severe infections. }

**Objective:** To evaluate the post-antibiotic effect (PAE) of plazomicin in vitro against a panel of multidrug-resistant Enterobacteriaceae (MDR-Enterobacteriaceae).

**Methods:** MIC and PAE were determined in broth microdilution (CLSI M7-A9) for multidrug-resistant (MDR) and characterized AG and CBP Enterobacteriaceae, including ESBL and CRE. To determine initial exposure concentration, CLSI synergy breakpoints were used. After exposure, drugs were removed via centrifugation and washing. Bacteria were then incubated at 35°C in the absence of drug for 10 hr to determine viable counts by serial dilution plating. The resulting CFU/mL were calculated and the log regrowth time was determined.

**RESULTS:** The PAE of PLZ increased with increasing exposure concentration as drug levels fall below the MIC during dosing, though its clinical relevance must be determined in pharmacodynamic in vivo models.

**CONCLUSIONS:** Plazomicin maintained potent bactericidal activity against the evaluated MDR-Enterobacteriaceae, which included isolates harboring extended-spectrum β-lactamases and carbapenemases, as well as EMRSA-16 and EMSci-16 strains.

**ACKNOWLEDGEMENTS:** The authors would like to acknowledge the Sponsor (Achaogen, Inc.) for funding the study described herein and for providing test organisms.

**REFERENCES:**


**SUNDAY 205**

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**References:**