were approximately 24. This is very similar to previous studies of omadacycline against S. pneumoniae (stasis AUC/MIC 18) and other PK/PD evaluations of tetracycline-class antibiotics. 1-log kill targets were only 2–3 fold more than stasis targets for each strain. This data should provide useful in the dose-regimen optimization of omadacycline.

**Disclosures.** D. R. Andes, Paratek: Grant Investigator, Research support

**1532. Human Target Attainment Probabilities for Delafloxacin against Escherichia coli and Pseudomonas aeruginosa**

Randall Hoover, PhD1; Andrea Marra, PhD1; Erin Duffy, PhD1 and Sue K. Cammarata, MD3; Melinta Therapeutics, New Haven, Connecticut, 1Pharmacology, Melinta Therapeutics, New Haven, Connecticut, 3Melinta Therapeutics, New Haven, Connecticut, 4Melinta Therapeutics, Inc., New Haven, Connecticut

**Session:** 167. Preclinical Study with New Antibiotics and Antifungals

**Friday, October 6, 2017: 12:30 PM**

**Background.** Delafloxacin (DLX) is a broad-spectrum fluoroquinolone antibiotic under FDA review for the treatment of ABSSSI. Previous studies determined DLX bacterial stasis and 1-log bacterial reduction free AUC0-24/MIC (AUC0-24/MIC) targets for Escherichia coli (EC) and Pseudomonas aeruginosa (PA) in a mouse thigh infection model. The resulting PK/PD targets were used to predict DLX target attainment probabilities (TAP) in humans.

**Methods.** Monte Carlo simulations were used to estimate TAP with DLX 300 mg IV q12hr. Human DLX plasma pharmacokinetics were determined in patients with ABSSSI in a Phase 3 clinical trial. Individual AUC values were analyzed and determined to be log-normally distributed. The parameters of the AUC distribution were used to simulate random values for AUC/MIC, which then were combined with random MIC values based on 2014–2015 US distributions of skin and soft tissue isolates of EC (n = 108) and PA (n = 40), to calculate PK/PD TAPS.

**Results.** DLX AUC/MIC targets for bacterial stasis and 1-log bacterial reduction for EC were 14.5 and 26.2, and for PA were 3.81 and 5.02, respectively. The Monte Carlo simulations for EC predicted TAPS of 98.7% for stasis at an MIC of 0.25 µg/mL and 99.3% for 1-log bacterial reduction at an MIC of 0.12 µg/mL. The simulations for PA predicted TAPS of 97.3% for stasis and 86.5% for 1-log bacterial reduction at an MIC of 1 µg/mL.

**Conclusion.** DLX 300 mg IV q12hr, should achieve AUC24/MIC ratios that are adequate to treat ABSSSI caused by most contemporary isolates of EC and PA. Similar results would be adequate to treat ABSSSI caused by most contemporary isolates of EC and PA. For EC, MICs of mostly strains were decreased two to four doubling dilutions for a single dose administration and persisted in lesions at above MPC level of 29.7 µg/mL at 72 hours postdose.

**Disclosure.** These findings indicate that current echinocandin drugs may be limited by penetration at the site of infection, which have implications for clinical outcomes and emergence of resistance in patients with IAC.

**Disclosures.** C. J. Clancy, Merck: Received research funding, Research support; Astellas: Received research funding, Research support; Cidara: Received research funding, Research support; Astellas: Scientific Advisor, Advisory board; Merck: Scientific Advisor, Advisory board; Cidara: Scientific Advisor, Advisory board; D. Perlin, Cidara: Research Contractor and Scientific Advisor, Research grant; Amplyx: Research Contractor and Scientific Advisor, Research grant; Matinas: Scientific Advisor, Research support; Scynexis: Research Contractor and Scientific Advisor, Research grant; Merck: Research Contractor, Research grant; Astellas: Research Contractor, Research grant

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**1534. In Vitro Synergistic Activity of Biapenem Combination with Sulbactam, Colistin, and Fosfomycin Sodium Against Multidrug-resistant Acinetobacter baumannii Isolates from Tertiarycare Hospitals in Thailand**

Janta Na Hongsaing, MS1; Preecha Montakitkun, Assoc. Prof2; Tanya Paiboovong, MS3; and Sujinda Chomnawang, Assoc. Prof1; 1Department of Pharmacy, Faculty of Pharmacy, Mahidol University, Bangkok, Thailand; 2Faculty of pharmacy, Mahidol University, Bangkok, Thailand; 3Faculty of Pharmacy, Siam University, Bangkok, Thailand, 4Department of Microbiology, Faculty of Pharmacy, Mahidol University, Bangkok, Thailand

**Session:** 167. Preclinical Study with New Antibiotics and Antifungals

**Friday, October 6, 2017: 12:30 PM**

**Background.** Acinetobacter baumannii has become a major cause of nosocomial infections worldwide due to highly resistant to various groups of antibacterial agents. This in vitro study was determine the MICs for sulbactam, colistin, fosfomycin sodium individually and synergistic activity of both in combination with biapenem against multidrug-resistant A. baumannii.

**Methods.** The MICs and synergistic interaction of sulbactam, colistin, fosfomycin sodium and biapenem were determined according to the Clinical and Laboratory Standards Institute (CLSI) guidelines (2016) by the checkerboard technique. 40 clinical MDR-Acinetobacter baumannii isolates from 13 tertiarycare hospitals in Thailand were tested. The synergistic effect was evaluated by the fractional inhibitory concentration index (FICI).

**Results.** The MICs for MDR- Acinetobacter baumannii results of biapenem and other agents are shown in Figure 1. The FICI results showed all 40 strains (100%) had an FICI ≤ 0.5, suggesting a synergistic effect of colistin in combination with biapenem (Table 1). MICs of mostly strains were decreased two to four doubling dilutions for both antibacterial agents. Moreover, 95% of isolates have MICs to colistin and fosfomycin sodium lower than sensitivity breakpoint when combined with biapenem. The result showed no data on the antagonistic effect (FICI > 4) of all biapenem-based combinations.

**Conclusion.** The combination of colistin or fosfomycin sodium show synergistic pattern and MIC improvements for all strains. For that reason, the use of colistin, fosfomycin sodium combined with biapenem could be a promising treatment option for MDR- Acinetobacter baumannii.

**FIGURE 1.** MIC for multidrug resistant Acinetobacter baumannii biapenem (n = 63), sulbactam (n = 40), colistin (n = 40), and fosfomycin sodium (n = 40).