Background: Zidovudine (ZID) in combination with either carapenem (NPA) or cefepime (FEP) has been shown to have significant bacteriostatic and bactericidal activity against several Gram-negative pathogens, with an overall minimal inhibitory concentrations (MICs) ranging from 0.12 to 1.0 µg/mL. The present study evaluated the bacteriostatic and bactericidal activity of ZID alone or in combination with cefepime (FEP) against a diverse collection of clinically significant P. aeruginosa isolates.

Methods: A total of 76 P. aeruginosa isolates were tested using broth microdilution susceptibility testing (CLSI M100-S23). MICs for cefepime (FEP), zidovudine (ZID), meropenem (MRO), cephalosporins, and carbapenens were determined using a 2-fold dilutional step in 96-well format. Isolates were selected for clinical drug resistance phenotypes, were all tested on day 1 and again after 24 h. Antimicrobial susceptibilities were performed using CLSI breakpoints for 

Results: The MICs of 76 P. aeruginosa isolates for cefepime (FEP), zidovudine (ZID), meropenem (MRO), cephem, carbapenem and extended spectrum cephalosporins were determined. Cross- resistance patterns were determined using the broth microdilution susceptibility testing method. The MICs of the isolates were determined using a 2-fold dilutional step in 96-well format. Antimicrobial susceptibilities were performed using CLSI breakpoints for 

Conclusions: Zidovudine in combination with either cefepime or meropenem has significant bacteriostatic and bactericidal activity against a broad range of P. Aeruginosa isolates. These results are consistent with previous studies, and suggest that ZID may be a useful addition to the antimicrobial armamentarium for the treatment of infections caused by P. aeruginosa.