

eP174

ePoster Viewing

Antibacterial drug activity and interactions in Gram-positive organisms

**ORITAVANCIN DOES NOT ANTAGONIZE THE ACTIVITY OF COMMON ANTIBACTERIAL AGENTS FOR GRAM-POSITIVE AND GRAM-NEGATIVE INFECTIONS**

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Objectives: A single 1200 mg dose of oritavancin has completed Phase 3 development for complicated skin and soft tissue infections. This study assessed whether oritavancin antagonizes the antibacterial activity of Gram-positive and Gram-negative agents *in vitro*.

Methods: Two Gram-positive bacterial isolates (*Staphylococcus aureus* ATCC 29213 and *Enterococcus faecalis* ATCC 29212) and two Gram-negative isolates (*Escherichia coli* ATCC 25922 and *Pseudomonas aeruginosa* ATCC 27853) were tested. Commonly-used representatives of nine different classes of antibacterial agents were evaluated. Single-agent MICs and the fractional inhibitory concentration indices (FIC<sub>i</sub>) of the combinations were determined by the widely-used checkerboard method from 2 to 3 independent experiments. The FIC<sub>i</sub> were scored as follows: FIC<sub>i</sub> ≤0.5, synergy (S); 0.5 > FIC<sub>i</sub> ≤4, indifference (I); and FIC<sub>i</sub> >4, antagonism (A) As per CLSI M07-A9 guidelines, testing was performed in cation-adjusted Mueller-Hinton broth containing 0.002% polysorbate 80 ( for oritavancin) or with other indicated supplements (for other agents).

Results: Oritavancin MICs were 0.06 mg/l for *S. aureus* ATCC 29213, 0.015 mg/l for *E. faecalis* ATCC 29212 and were within the quality control range as indicated in CLSI M100-S23. As expected, oritavancin did not exhibit activity against the two Gram-negative pathogens, with no observable MIC within the range of concentrations tested (0.015-8 mg/l). The single-agent MICs for each agent used in combination with oritavancin were within the specified quality-control ranges for the 4 organisms. All oritavancin combinations exhibited 0.5 >= FIC<sub>i</sub> <4 against the tested Gram-positive and Gram-negative pathogens, indicating indifference (table).

Conclusion: Oritavancin does not antagonize the *in vitro* activity of commonly-used Gram-positive and Gram-negative antibacterial agents that may be used concurrently.

Gram-positive pathogens			Gram-negative pathogens		
Oritavancin combination	<i>S. aureus</i>	<i>E. faecalis</i>	Oritavancin combination	<i>E. coli</i>	<i>P. aeruginosa</i>
	ATCC 29213	ATCC 29212		ATCC 25922	ATCC 27853
	FIC <sub>i</sub>	FIC <sub>i</sub>		FIC <sub>i</sub>	FIC <sub>i</sub>
Ampicillin	I	I	Ampicillin	I	-
Azithromycin	I	not tested	Aztreonam	not tested	I
Daptomycin	I	I	Cefepime	I	I
Gentamicin	I	I	Gentamicin	I	I
Levofloxacin	I	I	Levofloxacin	I	I
Linezolid	I	I	Meropenem	I	I
Minocycline	I	I	Minocycline	I	not tested
Teicoplanin	I	I	Piperacillin	not tested	I
Vancomycin	I	I			