

identifications were confirmed at JMI Laboratories. Susceptibility testing was performed according to CLSI broth microdilution methodology, and CLSI (2019) breakpoints were applied where applicable. Other antimicrobials tested included levofloxacin (LEV) and moxifloxacin (MOX; not tested in 2015). Multidrug-resistant (MDR) SPN isolates were categorized as being nonsusceptible (NS) to amoxicillin-clavulanate, erythromycin, and tetracycline; other SPN phenotypes were LEV-NS or penicillin (PEN)-NS. β -Lactamase (BL) presence was determined for HI, HP, and MC.

Results. The activities of the 3 FQs are shown in the table. The most active agent against SPN was DLX, with the lowest MIC_{50/90} values of 0.015/0.03 mg/L. DLX activities were similar when tested against the MDR or PEN-NS for SPN phenotypes. LEV-NS isolates had DLX MIC_{50/90} results of 0.12/0.25 mg/L. DLX was the most active FQ against HI, HP, and MC. BL presence did not affect FQ MIC values for HI or MC; only 2 HP isolates were BL-positive.

Conclusion. DLX demonstrated potent *in vitro* antibacterial activity against SPN, HI, HP, and MC. DLX was active against MDR SPN that were NS to the agents commonly used as treatments for CABP. DLX had excellent activity against LEV-NS SPN. These data support the continued study of DLX as a potential treatment for CABP.

Organism/Phenotype (n)	Delafloxacin MIC _{50/90} (mg/L)	Levofloxacin MIC _{50/90} (mg/L)	Moxifloxacin MIC _{50/90} (mg/L, n*)
<i>S. pneumoniae</i> (1,975)	0.015/0.03	1/1	≤0.12/0.25 (1,684)
MDR (84)	0.03/0.03	1/2	≤0.12/0.25 (74)
Pen-NS (745)	0.015/0.03	1/1	≤0.12/0.25 (637)
LEV-NS (16)	0.12/0.25	>4/>4	2/4 (13)
<i>H. influenzae</i> (1,128)	≤0.001/0.002	≤0.015/0.03	0.03/0.06 (965)
BL-positive (363)	≤0.001/0.002	≤0.015/0.03	0.03/0.06 (318)
<i>H. parainfluenzae</i> (43)	0.008/0.015	0.03/0.12	0.12/0.25 (40)
<i>M. catarrhalis</i> (684)	0.004/0.008	0.03/0.06	0.06/0.06 (598)
BL-positive (589)	0.004/0.008	0.03/0.06	0.06/0.06 (585)

*Number of isolates shown for moxifloxacin, not tested in 2015.

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1583. Eight Years of Sustained Potency and Activity of Oritavancin against Gram-Positive Isolates Causing Bacteremia and Endocarditis in the USA, Including Enterococcal Infections Requiring an Optimized Dosing Strategy for Daptomycin
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Background. Oritavancin (ORI) is a potent lipoglycopeptide with desirable PK/PD parameters for treating serious gram-positive infections. This study assessed the activity of ORI against *Staphylococcus aureus* (SA), *Enterococcus faecalis* (EF), and *E. faecium* (EFM) causing bloodstream infection (BSI), including infective endocarditis (IE) and daptomycin (DAP)-susceptible dose-dependent (SDD) vancomycin-resistant (VRE) subsets. We also evaluated the longitudinal activity of ORI.

Methods. A total of 5,469 SA, 1,157 EF, and 721 EFM were recovered from BSI in 35 US sites (2011–2018). Subsets of SA isolates causing IE (84) and EFM displaying DAP-SDD-VRE phenotypes (230) were included. Identification was confirmed by MALDI-TOF MS and isolates were tested for susceptibility (S) according to CLSI.

Results. Overall, ORI showed similar MIC₅₀ (0.03 mg/L) and MIC₉₀ results (0.06 mg/L) against MRSA and MSSA (figure) and the SA EC subset (41.7% MRSA; data not shown). Similar findings were noted for ORI tested against EF DAP-S (MIC_{50/90} 0.015/0.06 mg/L) and DAP-SDD (MIC_{50/90} 0.015/0.06 mg/L). ORI MIC values against DAP- and VAN-S EFM (MIC_{50/90} ≤0.008/0.015 mg/L) were at least 8-fold lower than those from DAP-SDD-VRE isolates (MIC_{50/90} 0.06/0.12 mg/L; 31.9% of all EFM), and all EFM were inhibited by ORI at ≤0.25 mg/L. The longitudinal analysis showed MRSA rates varying from 39.7% (2017) to 46.8% (2011), while the annual ORI MIC₅₀ and MIC₉₀ results were 0.015–0.06 mg/L and 0.03–0.12 mg/L, respectively, against MRSA during the 8-year period. ORI yearly MIC₅₀ and MIC₉₀ results were 0.015–0.03 mg/L and 0.03–0.12 mg/L against EF, respectively. MIC₅₀ and MIC₉₀ results of 0.008–0.03 mg/L and 0.03–0.12 mg/L, respectively, were obtained for ORI against the DAP-SDD EF subset each year. ORI MIC₅₀ and MIC₉₀ results of 0.03–0.06 and 0.06–0.12 mg/L were obtained annually against DAP-SDD-VRE (EFM), respectively.

Conclusion. ORI showed a potent activity against this collection of isolates causing BSI and IE in the USA, including resistant subsets requiring higher dosage regimens when treating serious infections. In addition, ORI maintained a stable potency throughout the 8-year study period with no apparent temporal trends.

Organism / Phenotype	Cumulative % inhibited by oritavancin at:						MIC _{50/90}
	0.008	0.015	0.03	0.06	0.12	0.25	
<i>S. aureus</i>							
MSSA	4.2	40.1	79	95.9	100		0.03/0.06
MRSA	3.6	39.7	77.4	95	99.9	100	0.03/0.06
<i>E. faecalis</i>							
DAP-S	27.5	68.4	88.9	94.4	97.8	99.6	0.015/0.06
DAP-SDD	28.9	61.4	77.1	92.8	98.8	100	0.015/0.06
<i>E. faecium</i>							
DAP-S-VSE	85.6	99	100				≤0.008/0.015
DAP-SDD-VRE	4.3	18.3	49.6	82.2	97	100	0.06/0.12

MSSA, methicillin-susceptible *S. aureus*; MRSA, methicillin-resistant *S. aureus*; DAP-S, daptomycin susceptible; DAP-SDD, daptomycin susceptible-dose dependent; VSE, vancomycin-susceptible enterococci; VRE, vancomycin-resistant enterococci.

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1584. Minocycline Activity Against *Stenotrophomonas maltophilia* Isolated From Patients in US Hospitals

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Background. *Stenotrophomonas maltophilia* (SM) has emerged as a common hospital-associated opportunistic pathogen found in immunocompromised and immunocompetent patients. SM is intrinsically resistant to many common drug classes, including carbapenems, cephalosporins, and aminoglycosides. Only 4 antibiotics have CLSI breakpoints for SM: minocycline (MIN), ceftazidime (CAZ), levofloxacin (LVX) and trimethoprim-sulfamethoxazole (TMP-SMX). Minocycline is frequently used to treat SM infections. In this study, we analyzed susceptibilities of SM isolates collected as part of the SENTRY Program. We also examined the frequency of SM isolation from pneumonia in hospitalized patients (PIHP) among all Gram-negative (GN) species.

Methods. From 2014 to 2018, 990 SM isolates were collected from hospitalized patients in 32 US hospitals. Hospitals submitted 1 isolate per patient per infection episode that met local criteria for being the likely causative pathogen and submitted consecutive isolates from pneumonia. Isolates were tested for MIN susceptibility (S) using the CLSI broth microdilution method at JMI Laboratories. Other antimicrobials tested were CAZ, LVX, and TMP-SMX. TMP-SMX was tested 3 of 5 years. All infection types were included in the susceptibility analysis. The prevalence of SM isolates in PIHP during this period was also analyzed.

Results. There were 9,120 GN pathogens isolated from PIHP. The most commonly isolated species was *P. aeruginosa* (34.7%), followed by *Klebsiella pneumoniae* (12.6%), *Escherichia coli* (10.1%), and SM (7.9%). Among the 990 infections caused by SM, PIHP was the most common at 72.4%, followed by bloodstream infections (14.4%) and skin/skin structure infections (6.9%). The %S and MIC_{50/90} values of the 4 antimicrobials tested in this study are shown in the table.

Conclusion. SM was the fourth most frequent cause of GN PIHP in US medical centers. MIN was the most active drug tested against SM with 99.5%S, followed by TMP-SMX (94.7%), and CAZ was the least active with 28.5%S. This study suggests that MIN may be a consideration as a treatment for infections caused by SM, with a very low resistance rate based on CLSI breakpoints.

Table. Activities of MIN and comparator agents when tested against 990 *S. maltophilia* isolates

Antimicrobial agent	No. of isolates	MIC ₅₀	MIC ₉₀	Range	CLSI ^a		
					%S	%I	%R
Minocycline	990	0.5	2	≤0.06 to >8	99.5	0.3	0.2
Ceftazidime	990	32	>32	0.25 to >32	28.5	10.2	61.3
Levofloxacin	990	1	>4	≤0.12 to >4	77.8	8.9	13.3
Trimethoprim-sulfamethoxazole	609	≤0.5	1	≤0.5 to >4	94.7		5.3

^a CLSI (2019).

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1585. Isavuconazonium Sulfate plus Micafungin Improves Survival in an Immunocompromised Murine Model of Disseminated Fusariosis

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Background. Disseminated fusariosis in patients with hematological malignancies is a frequently fatal and emerging invasive mycosis. *Fusarium* spp. are often resistant to safely achievable concentrations of mould active triazoles and amphotericin B. We aimed to determine the efficacy of isavuconazonium sulfate (ISA) alone or in combination with micafungin (MICA) in a murine model of disseminated fusariosis caused by *Fusarium solani*.

Methods. Groups of five 5-week-old Swiss Webster female mice, 20–22 g, were rendered neutropenic by intraperitoneal (IP) injection of cyclophosphamide at 200 mg/kg on day -2 and 150 mg/kg on day +3. Mice were infected with 5 × 10⁵ CFU *F. solani* intravenously (IV) via the lateral tail vein on day 0. To prevent bacterial infection, ceftazidime was administered 50 mg/kg/day IP. Therapy began 18 h post-challenge for 6 days. MICA was given at dosages of 10, 5, 2.5 and 1.25 mg/kg IP Q12h combined with ISA 14 mg/kg/day IP. Six groups of mice received ISA orogastrically (OG) Q8h, Q12h and Q24h at 224 mg/kg alone or combined with MICA at 10 mg/kg Q12h IP. Kaplan-Meier survival analysis was performed.

Results. ISA at 14 mg/kg Q12h combined with 10 mg/kg MICA doses resulted in improved survival but with no significant reduction of residual fungal burden compared with monotherapy or other ISA/MICA dose combinations. Improved survival