4985 (654 Enterobacterales and 4331 non-fermenters) MEM non-susceptible (based on CLSI breakpoints) strains were used for the current analysis.

Results. The minimum inhibitory concentration (MIC) range and MIC_{90} for CFDC and comparators for each MBL-producing organism group are shown in the Table. Against NDM-producing Enterobacterales, of which 42% and 33% were isolated in Turkey and Russia, respectively, CFDC inhibited the growth of 84% of isolates tested at ≤4 µg/mL. CFDC MIC_{90} was 4 µg/mL for VIM-producing Enterobacterales (41% and 31% isolated in Greece and Italy, respectively), 1 µg/mL for VIM-producing *P. aeruginosa* (50% isolated in Russia), and 4 µg/mL for IMP-producing *P. aeruginosa* (88% isolated in Czech Republic). Other comparators (except for CST) were not active against these MBL producers.

Table. MIC range and MIC90 (µg/mL) for CFDC and comparators of MBL-producing organisms

Table. MIC range and MIC_{90} (µg/mL) for CFDC and comparators of MBL-producing organisms

	NDM-producing Enterobacterales (N=45)		VIM-producing Enterobacterales (N=75)		NDM-producing A. baumannii (N=5)		VIM-producing P. aeruginosa (N=134)		IMP-producing P. aeruginosa (N=16)	
Compounds	MIC range	MIC_{90}	MIC range	MIC_{90}	MIC range	MIC_{90}	MIC range	MIC_{90}	MIC range	MIC_{90}
CFDC	0.25–8	8	0.12–4	4	1–8	NC	0.008–4	1	0.12–4	4
CZA	1–>64	>64	4–>64	>64	>64	NC	2–>64	>64	>64	>64
C/T	>64	>64	32–>64	>64	>64	NC	0.5–>64	>64	>64	>64
MEM	4–>64	>64	2–>64	64	64–>64	NC	4–>64	>64	8–>64	>64
FEP	32–>64	>64	0.25–>64	>64	>64	NC	8–>64	>64	>64	>64
CST	≤0.25–8	1	≤0.25–>8	>8	≤0.25–0.5	NC	≤0.25–4	2	1–2	2
CIP	2–>8	>8	≤0.12–>8	>8	≤0.12–>8	NC	0.25–>8	>8	>8	>8

NC: MIC_{90} values were not calculated because the number of isolates was ≤10. IMP: imipenemase metallo-β-lactamase; NDM: New Delhi metallo-β-lactamase; VIM: Verona integron-encoded metallo-β-lactamase.

Conclusion. CFDC inhibited the growth of 100% of MBL-positive GNB at ≤8 mg/mL and showed MIC_{90} of 4 µg/mL against all 275 MBL producers, indicating that CFDC has high potential for treating infections caused by these difficult-to-treat strains.

Disclosures. Miki Takemura, MSc, Shionogi & Co., Ltd. (Employee) Krystyna Kazmierczak, PhD, Shionogi & Co., Ltd. (Independent Contractor) Daniel F. Sahm, PhD, IHMA (Employee)Pfizer, Inc. (Consultant)Shionogi & Co., Ltd. (Independent Contractor) Roger Echols, MD, Shionogi Inc. (Consultant) Yoshinori Yamano, PhD, Shionogi & Co., Ltd. (Employee)

1253. *In Vitro* Activity of Omadacycline against 7000 Bacterial Pathogens from the United States Stratified by Infection Type (2019)

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Session: P-58. Novel Agents

Background. Omadacycline (OMC) is a new aminomethylcycline antibacterial drug belonging to the tetracycline class, for intravenous or oral administration. It is well tolerated and has proven effective in the treatment of a variety of bacterial infections. OMC is active against bacterial strains expressing the most common clinically relevant tetracycline resistance mechanisms, namely efflux and ribosomal protection.

Methods. 7,000 clinical isolates were collected during 2019 in the SENTRY Surveillance Program from 31 medical centers in the United States (US). Isolates were obtained from bloodstream infection (23.8%), skin and skin structure infection (21.6%), pneumonia in hospitalized patients (22.7%), urinary tract infection (14.5%), intraabdominal infection (6.2%), community acquired respiratory tract infection (10.3%) and other infection types (0.9%). Identifications were confirmed by MALDI-TOF. One isolate/patient/infection episode was tested. Broth microdilution susceptibility testing was conducted according to CLSI M07 (2018) and M100 (2020) guidelines. Results were interpreted using US FDA and CLSI breakpoint criteria.

Results. OMC demonstrated potent *in vitro* activity against *Staphylococcus aureus* isolates representing multiple infection types (MIC_{90}, 0.12-0.25 mg/L; 94.7%-99.0% susceptible [S]) including MRSA (MIC_{90}, 0.25 mg/L; 96.5% S) (Table). All *S. lugdunensis* (MIC_{90}, 0.06 mg/L), *Enterococcus faecalis* (MIC_{90}, 0.12-0.25 mg/L), and *Haemophilus influenzae* (MIC_{90}, 1 mg/L) isolates were S to OMC. OMC was active against *Streptococcus pyogenes* isolates from SSSI (MIC_{90}, 0.12 mg/L; 93.3%-98.5%S) including macrolide-resistant (R) strains. Similarly, *S. pneumoniae* isolates from RTI were S to OMC (MIC_{90}, 0.06-0.12 mg/L; 98.8%-100%S) regardless of resistance to tetracycline or penicillin. Overall, 90.2%-93.6% of *Enterobacter cloacae* (MIC_{90}, 4 mg/L) and 89.7%-94.7% of *Klebsiella pneumoniae* (MIC_{90}, 4-8 mg/L) isolates from multiple infection types were S to OMC.

Conclusion. OMC demonstrated potent *in vitro* activity against Gram-positive and -negative bacterial pathogens from multiple infection types including SSSI and RTI and isolates displaying resistance to tetracycline, macrolides, and penicillin.

Table 1

		Omadacycline		Tetracycline	
Organism (no. of isolates)	Infection Type[a]	MIC_{90} (mg/L)	%S / %R[b]	MIC_{90} (mg/L)	%S / %R[c]
S. aureus (1,623)	ALL	0.25	98.3 / 0.2	≤0.5	95.0 / 4.0
S. aureus (736)	SSSI	0.12	99.0 / 0.1	≤0.5	94.3 / 4.3
S. aureus (396)	RTI	0.12	94.7 / 2.5[d]	≤0.5	94.9 / 5.1
MRSA (684)	ALL	0.25	96.5 / 0.4[e]	1	94.7 / 4.7
S. lugdunensis (26)	ALL	0.06	100 / 0.0[e]	≤0.5	96.2 / 0.0
E. faecalis (229)	ALL	0.25	100 / 0.0[e]	>16	29.3 / 70.7
E. faecalis (60)	SSSI	0.12	100 / 0.0	>16	21.7 / 78.3
S. pyogenes (68)	SSSI	0.12	98.5 / 0.0	>4	79.4 / 20.6
macrolide-R (15)	SSSI	0.12	93.3 / 0.0	>4	40.0 / 60.0
S. pneumoniae (380)	RTI	0.06	99.7 / 0.0	>4	77.1 / 22.6
tetracycline-R (86)	RTI	0.12	98.8 / 0.0	>4	0.0 / 100
penicillin-R (41)	RTI	0.06	100 / 0.0	>4	61.0 / 39.0
H. influenzae (291)	RTI	1	100 / 0.0	0.5	99.0 / 1.0
E. cloacae (219)	ALL	4	93.6 / 2.8[e]	16	85.4 / 11.4
E. cloacae (41)	SSSI	4	90.2 / 4.9	>16	83.3 / 11.9
K. pneumoniae (511)	ALL	4	93.2 / 3.5[f]	>16	78.9 / 18.6
K. pneumoniae (39)	SSSI	8	89.7 / 5.1	>16	66.7 / 30.8
K. pneumoniae (136)	RTI	4	90.4 / 5.1	>16	77.2 / 19.9
K. pneumoniae (113)	UTI	4	94.7 / 1.8[f]	>16	79.6 / 17.7

[a] ALL; all infection types, SSSI; skin and skin structure infection, RTI; respiratory tract infection, UTI; urinary tract infection.
[b] % susceptible (S) and % resistant (R) using US FDA breakpoint interpretive criteria.
[c] % S and % R using CLSI breakpoint interpretive criteria.
[d] US FDA breakpoints for CABP (MSSA only) applied for all *S. aureus*.
[e] US FDA breakpoint for ABSSSI applied.
[f] US FDA breakpoint for ABSSSI and CABP applied.

Disclosures. Michael A. Pfaller, MD, Amplyx Pharmaceuticals (Research Grant or Support)Basilea Pharmaceutica International, Ltd (Research Grant or Support) Cidara Therapeutics (Research Grant or Support)Cidara Therapeutics (Research Grant or Support)Department of Health and Human Services (Research Grant or Support) Fox Chase Chemical Diversity Center (Research Grant or Support)Paratek Pharma, LLC (Research Grant or Support) Jennifer M. Streit, BS, A. Menarini Industrie Farmaceutiche Riunite S.R.L. (Research Grant or Support)A. Menarini Industrie Farmaceutiche Riunite S.R.L. (Research Grant or Support)Allergan (Research Grant or Support)Melinta Therapeutics, Inc. (Research Grant or Support)Melinta Therapeutics, Inc. (Research Grant or Support)Melinta Therapeutics, Inc. (Research Grant or Support)Merck (Research Grant or Support)Paratek Pharma, LLC (Research Grant or Support) Helio S. Sader, MD, PhD, A. Menarini Industrie Farmaceutiche Riunite S.R.L. (Research Grant or Support)Allergan (Research Grant or Support) Allergan (Research Grant or Support)Allergan (Research Grant or Support)Cipla Ltd. (Research Grant or Support)Cipla Ltd. (Research Grant or Support)Melinta (Research Grant or Support)Merck (Research Grant or Support)Merck (Research Grant or Support)Paratek Pharma, LLC (Research Grant or Support)Pfizer (Research Grant or Support) Mariana Castanheira, PhD, 1928 Diagnostics (Research Grant or Support) A. Menarini Industrie Farmaceutiche Riunite S.R.L. (Research Grant or Support) Allergan (Research Grant or Support)Allergan (Research Grant or Support)Amplyx Pharmaceuticals (Research Grant or Support)Cidara Therapeutics (Research Grant or Support)Cidara Therapeutics (Research Grant or Support)Cipla Ltd. (Research Grant or Support)Cipla Ltd. (Research Grant or Support)Fox Chase Chemical Diversity Center (Research Grant or Support)GlaxoSmithKline (Research Grant or Support) Melinta Therapeutics, Inc. (Research Grant or Support)Melinta Therapeutics, Inc. (Research Grant or Support)Melinta Therapeutics, Inc. (Research Grant or Support) Merck (Research Grant or Support)Merck (Research Grant or Support)Merck & Co, Inc. (Research Grant or Support)Merck & Co, Inc. (Research Grant or Support)Paratek Pharma, LLC (Research Grant or Support)Pfizer (Research Grant or Support)Qpex Biopharma (Research Grant or Support)

1254. *In vitro* activity of sulbactam-durlobactam against recent global clinical *Acinetobacter baumannii-calcoaceticus* complex isolates

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Session: P-58. Novel Agents

Background. *Acinetobacter baumannii-calcoaceticus* complex (ABC) causes severe infections that are difficult to treat due to increasing resistance to antibacterial therapy. Sulbactam (SUL) has intrinsic antibacterial activity against ABC, but its clinical utility has been compromised by the prevalence of serine β-lactamases. Durlobactam (DUR, previously ETX2514) is a diazabicyclooctenone β-lactamase inhibitor with potent activity against Ambler classes A, C and D serine β-lactamases that effectively restores SUL activity against ABC isolates. SUL-DUR is an antibiotic designed to treat serious infections caused by *Acinetobacter*, including multidrug-resistant strains, which is currently in Phase 3 clinical testing. The potency of SUL-DUR against geographically diverse ABC isolates collected in 2018 was measured.