

P2450 **European surveillance study of CF-301 activity against contemporary *Staphylococcus aureus* isolates from Italy, Greece, and Hungary**

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Background: CF-301 is a novel, recombinantly-produced, bacteriophage-derived lysin (cell wall hydrolase) which is in Phase 2 of clinical development for the treatment of *S. aureus* bacteremia including endocarditis used in addition to standard of care antibiotics. Surveillance data from 3 European countries is presented here.

Materials and Methods: CF-301 activity was tested against 150 clinical isolates of methicillin-resistant (75) and methicillin susceptible (75) *S. aureus* (MRSA and MSSA, respectively) obtained in 2015 from 4 sites in Italy, 3 sites in Greece and 2 sites in Hungary. The study was performed using a previously approved modification of the Clinical and Laboratory Standards Institute broth microdilution method that uses cation-adjusted Mueller Hinton broth supplemented with 25% horse serum and 0.5 mM DL-dithiothreitol for minimal inhibitory concentration (MIC) testing with CF-301.

Results:

CF-301 vs. <i>S. aureus</i> MICs and MIC ₅₀ /MIC ₉₀ by Country (µg/mL)								
Country	Type	N	0.25	0.5	1	MIC ₅₀	MIC ₉₀	Range
Greece	MSSA	26	1	16	8	0.5	1	0.25-1
	MRSA	21	4	13	5	0.5	1	0.25-1
Italy	MSSA	27	0	15	12	0.5	1	0.5-1
	MRSA	28	6	17	5	0.5	1	0.25-1
Hungary	MSSA	23	1	16	8	0.5	1	0.5-1
	MRSA	25	5	18	2	0.5	0.5	0.25-1

CF-301 MICs for contemporary clinical isolates from Greece, Italy and Hungary ranged from 0.25 – 1 µg/mL. The CF-301 MIC₅₀ for all isolates was 0.5 µg/ml. The MIC₉₀ was 1 µg/mL, with the exception of Hungary which had a MIC₉₀ of 0.5 µg/ml. MIC testing of CF-301 on *S. aureus* was reproducible using the CLSI approved method.

Conclusions: All clinical *S. aureus* isolates collected in 2015 from three European countries had CF-301 MICs within a range of 0.25 to 1 µg/mL. The findings are consistent with previously reported observations from a surveillance study of clinical isolates collected in 2011 from sources across the U.S.