Bloodstream infections (BSI) require prompt management with targeted therapy. Resistance to predicted carbapenems has become increasingly reported among Enterobacteriaceae, including imipenem-resistance etiologies, varying from 6.2% to 28.4% across different studies. Resistance remains a major setback in the management of BSI due to the widespread resistance profile. The objective of the current study was to examine the susceptibility profiles and antibiograms of BSI pathogens, including Acinetobacter, Serratia, Enterobacter, E. coli, and Staphylococcus, and to determine the potential role of doripenem and comparators in late-stage clinical development.

# Materials and Methods
A total of 20,316 non-ESBL negative clinical isolates were submitted from 2014 to 2015 to the North American Surveillance program, representing isolates from North America (NA) and Latin America (LA) in 2014, and North America (NA), Latin America (LA), and Europe (EU) in 2015. The isolates were identified, and their susceptibilities to selected antimicrobial agents were determined using standard disk diffusion methods or broth microdilution methods. The isolates were classified as oxacillin-susceptible (Oxacillin-susceptible) and non-ESBL isolates based on the CLSI guidelines. The susceptibility profiles and antibiograms were determined against leading Gram-positive and Gram-negative pathogens, including Acinetobacter, Serratia, Enterobacter, E. coli, and Staphylococcus. The in vitro activity of 3 carbapenems against leading Gram-positive and Gram-negative pathogens was evaluated in Table 1.

# Results
- **Confirmed EC ESBL-producers** varied from 1.2%/3.8%/6.3% in NA/EU/LA, respectively, against Acinetobacter, Serratia, Enterobacter, E. coli, and Staphylococcus.
- **Non-ESBL isolates** of Acinetobacter, Serratia, Enterobacter, E. coli, and Staphylococcus were examined for their susceptibility profiles and antibiograms. The results are presented in Table 1.
- **Susceptibility** of doripenem against leading Gram-negative bacteria was compared with selected antimicrobial agents tested in Table 2.
- **Compartment** showed doripenem was highly active against leading Gram-negative pathogens (susceptible to doripenem in 58.3% of ESBL isolates vs. 84.9% for non-ESBL isolates).
- **Break point criteria** are those of CLSI M100-S16 (2006); – = no break points established.
- **In Vitro Activity of Doripenem** in Comparison With Selected Antimicrobial Agents Tested

# Conclusions
- **Breadth of coverage** of the carbapenems (% at ≥90% range) was highest in North America (doripenem, 95%; meropenem, 91%; imipenem, 88%), followed by South America (90%), Europe (86%), and Asia (87%).
- **Break point criteria** are those of CLSI M100-S16 (2006); – = no break points established.
- **Comparative Activity** of doripenem showed the highest coverage of Acinetobacter (97%), followed by Staphylococcus (95%) and Streptococcus (90%).

# References
- Fritsche TR, Stilwell MG, Jones RN. At MIC values of 0.25 for Enterobacteriaceae (KSP; 2,729) and Klebsiella (9.2%), doripenem (DOR) was significantly better than meropenem and imipenem. J Antimicrob Chemother. 2005;54:144-154.