Doripenem (formerly S-4661), a parenteral carbapenem in late-stage clinical development: regional data assessing resistance to hydrolysis by contemporary pathogens.

**AMENDED ABSTRACT**

While previous studies have focused on limited populations of targeted species, particularly resistant subtypes or from specific endemic sites of infection, current surveillance data assessing particular regional resistance characteristics are needed as the compound nears approval for use in late-stage international surveillance testing program comparing the activity of doripenem and currently marketed carbapenems with other antinfectial agents against clinical isolates submitted as part of a global (North America, South America, and Europe) protocol for the years 2003-2005. A total of 51,042 bacterial strains were tested by reference Clinical and Laboratory Standards Institute (CLSI) (formerly NCCLS) methods, with susceptibilities to comparative agents interpreted by CLSI breakpoint criteria (H9262; H9263, 2006).

**MATERIALS AND METHODS**

**Bacterial Strain Collection**
A total of 51,042 consecutive clinical isolates were submitted from 54 to 64 medical centers located in North America, South America, and Europe as part of an international surveillance program originated from patients with documented bloodstream, respiratory, skin and soft tissue, and urinary tract infections. The distribution of testing sites and species is presented in Table 1.

**RESULTS**

- **Doripenem** was broadly active against carbapenem-resistant Enterobacteriaceae (S. anatum and nonluminescent-staphylococci, 100% at 4 μg/mL, Table 2). Among comparators, resistance was widespread, with doripenem-resistant Enterobacteriaceae (S. anatum and nonluminescent-staphylococci, 100% at 4 μg/mL, Table 2). Among comparators, resistance was widespread, with doripenem-resistant Enterobacteriaceae (S. anatum and nonluminescent-staphylococci, 100% at 4 μg/mL, Table 2). Among comparators, resistance was widespread, with doripenem-resistant Enterobacteriaceae (S. anatum and nonluminescent-staphylococci, 100% at 4 μg/mL, Table 2). Among comparators, resistance was widespread, with doripenem-resistant Enterobacteriaceae (S. anatum and nonluminescent-staphylococci, 100% at 4 μg/mL, Table 2).

**CONCLUSIONS**

- While inter-regional increases in ESBL-screen rates were apparent between 2003 and 2005.
- 7.4% to 11.5%.
- For the collection of P. aeruginosa tested here, doripenem inhibited 87.0% of isolates, compared with 81.1% for meropenem and only 71.1% for imipenem.
- Prevented the selection of any strain of Staphylococcus aureus (including methicillin-resistant strains).

**REFERENCES**

1. D. Thomas, et al., JMI Laboratories, North Liberty, Iowa, USA

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**CONFERENCE**