

Cefiderocol *In Vitro* Activity against Molecularly Characterized *Acinetobacter baumannii-calcoaceticus* complex and *Pseudomonas aeruginosa* Clinical Isolates Causing Infection in Europe and Adjacent Regions (2020)

Rodrigo E. Mendes, Timothy B. Doyle, Valerie Kantro, Dee Shortridge, Helio S. Sader, Mariana Castanheira
JMI Laboratories, North Liberty, Iowa, US

Objective

Cefiderocol and comparator activities were analysed against molecularly characterized *A. baumannii-calcoaceticus* complex and *P. aeruginosa* as a part of the SENTRY Antimicrobial Surveillance Program for Europe and surrounding regions.

Methods

A total of 340 *A. baumannii* and 1,212 *P. aeruginosa* were consecutively collected from 35 medical centres in Europe, Israel, and Turkey during 2020.

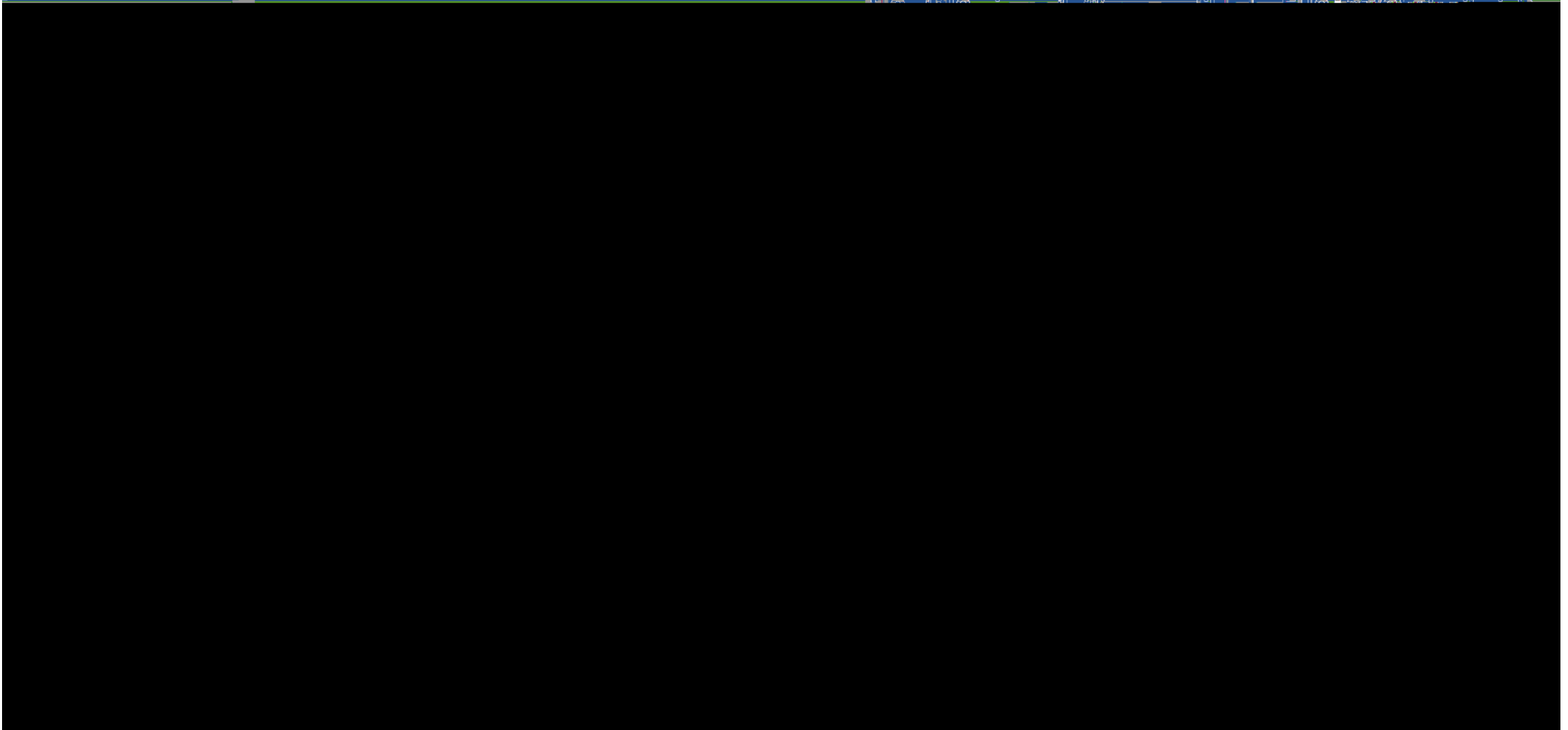
Isolates were tested for susceptibility by broth microdilution method.

- Cefiderocol was tested with iron-depleted media.
- MIC interpretation used EUCAST and CLSI breakpoints.

A. baumannii and *P. aeruginosa* mg/L or ceftazidime and/or cefepime MIC 16 mg/L were subjected to next-generation genome sequencing for screening of acquired extended-lactamase (ESBL) and carbapenemase genes.

Results

Table Activity of cefiderocol and main comparators against *P. aeruginosa* and *A. baumannii* from Europe and adjacent regions, including molecularly characterized clinical isolates



Results

A total of 35.0% of *P. aeruginosa* met the MIC screening criteria and carbapenemase genes were detected in 7.8% (33/424) of these isolates.

Cefiderocol (98.3-100% susceptible) had similar MIC₅₀ (0.12 mg/L) and MIC₉₀ (0.25-0.5 mg/L) values against both susceptible and resistant *P. aeruginosa* populations.

Other agents had lower activity (35.4-89.8% susceptible) against the resistant population of *P. aeruginosa*.

Cefiderocol (MIC_{50/90}, 0.12/1 mg/L; 100% susceptible) was active against a small subset of *P. aeruginosa* carrying carbapenemase genes. Other agents had limited activity.

A total of 64.7% (220/340) *A. baumannii* met the MIC screening criteria and acquired *bla*_{OXA} carbapenemases were detected in 98.2% (216/220) of these isolates.

Cefiderocol had the lowest MIC₅₀ and MIC₉₀ values



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