ECCMID 2022 Poster Number: 1139

Performance of the VITEK 2 Advanced Expert System (AES) as a Rapid Tool for Reporting Antimicrobial Susceptibility Testing (AST) in *Enterobacterales*

Cecilia G. Carvalhaes, Dee Shortridge, Leah N. Woosley, Nabina Gurund, Mariana Castanheira JMI Laboratories

Objective

To evaluate the performance of the VITEK 2 AES in comparison to the reference broth microdilution on a challenging set of whole genome sequenced *Enterobacterales* isolates of North and Latin American origin.

Methods

- 488 unique, molecularly characterized Enterobacterales isolates were selected from 2015-2019 SENTRY Antimicrobial Surveillance program (384 isolates) and CDC AR Bank (104 isolates).
- Isolates from North America (61 medical centers in the US) and Latin America (11 medical centers in 6 countries) were included.
- Isolates were tested by reference broth microdilution (BMD; CLSI) and VITEK 2 using N802 and XN15 AST cards and AES (v.9.02) in the CLSI-based + Natural Resistance (NATR) mode.
- BMD and VITEK 2 results for 29 antimicrobial agents were compared and discordant results were repeated by both methods using the same inoculum.
- The AES phenotypes were compared to resistant genotypes, while AES levels of confidence (green, yellow, and red) were compared to BMD results for accuracy.



Results

Conclusions Results Acknowledgements Contact

This study at JMI Laboratories was supported by bioM