

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

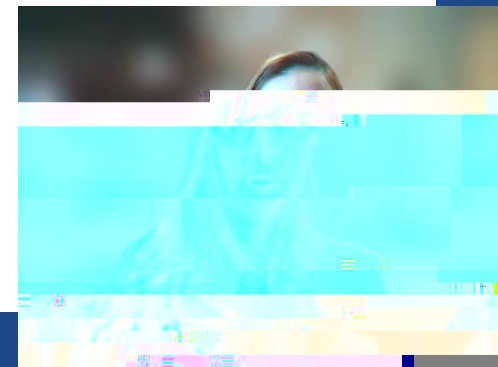
Cecilia G. Carvalhaes, Dee Shortridge, Leah N. Woosley, Nabina Gurund, Mariana Castanheira  
JMI Laboratories

## 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

## Results

## Conclusions

## Acknowledgements

This study at JMI Laboratories was supported by bioM

## Contact