Comparative evaluation of ETEST® ERV* bioMérieux with the CLSI broth microdilution method for Eravacycline MIC determination

V. SAVONNET1, C. FYE2, S. FONTAINE2, M. BOUVIER1, D. HALIMI3, R. MARTELIN1, G. ZAMBARDI1

1 bioMérieux Inc., Pearl River, New York, USA; 2 bioMérieux, Inc., Marcy l'Etoile, France; 3 Tetraphase Pharmaceuticals, Inc., Waterbury, USA.

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BACKGROUND

Eravacycline (XERAWAY®) is a novel, FDA and EMA approved fully-synthetic fluorocycline antibiotic developed by Tetraphase Pharmaceuticals Inc. for the treatment of complicated intra-abdominal infections (cIAI) including those caused by multidrug-resistant (MDR) pathogens. cIAI are an important cause of morbidity and are the second most common cause of infectious mortality in the intensive care unit. MDR pathogens have been highlighted as urgent public health threats by the US CDC and the WHO.

The new ETEST® ERV strip (MIC range 0.002 – 32 µg/mL) has been developed and calibrated versus the broth microdilution reference method (BMD) as described by the Clinical and Laboratory Standards Institute (CLSI) to determine the minimal inhibitory concentration (MIC) of eravacycline against Enterobacteriaceae and Enterococci.

RESULTS

The MICs for QC strains are within the expected CLSI ranges with reproducible results. Ellipses are easy to read, clear, without trailing.

The global distribution is homogeneous and shows only 1 discrepancy in term of Essential Agreement (see Table 4).

CONCLUSION

In an age of ESBL-related resistance, Eravacycline is a useful contribution to antimicrobial stewardship, as a carbapenem-sparing option. MIC determination enables to consolidate the molecule choice to treat the patient.

The new ETEST ERV strip could represent a valuable tool for eravacycline MIC determination and an alternative to the BMD reference method. ETEST will undergo clinical studies to seek FDA clearance and CE marking.

* For Research Use Only. The performance characteristics of this product have not been established yet.