

# **Report from the Broth Microdilution Ad Hoc Working Group**

**CLSI AST Subcommittee Meeting**

**San Diego, CA**

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# **Broth Microdilution Ad Hoc WG Members**

- **Halsey Boyd**
- **Scott Killian**
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- **Cindy Knapp**
- **Laura Koeth**
- **Bob Rennie**
- **Katherine Sei**
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- **John Turnidge**
- **Michael Ullery**
- **Bill Brasso – Chair**

**Reporting to: Methodology  
WG**

- **Steve Jenkins**
- **Brandi Limbago**

# Summary

## I. Address goals using a 'two-track' plan

### ➤ Track 1 – Define & Characterize the Main Sources of Variability in MIC Testing

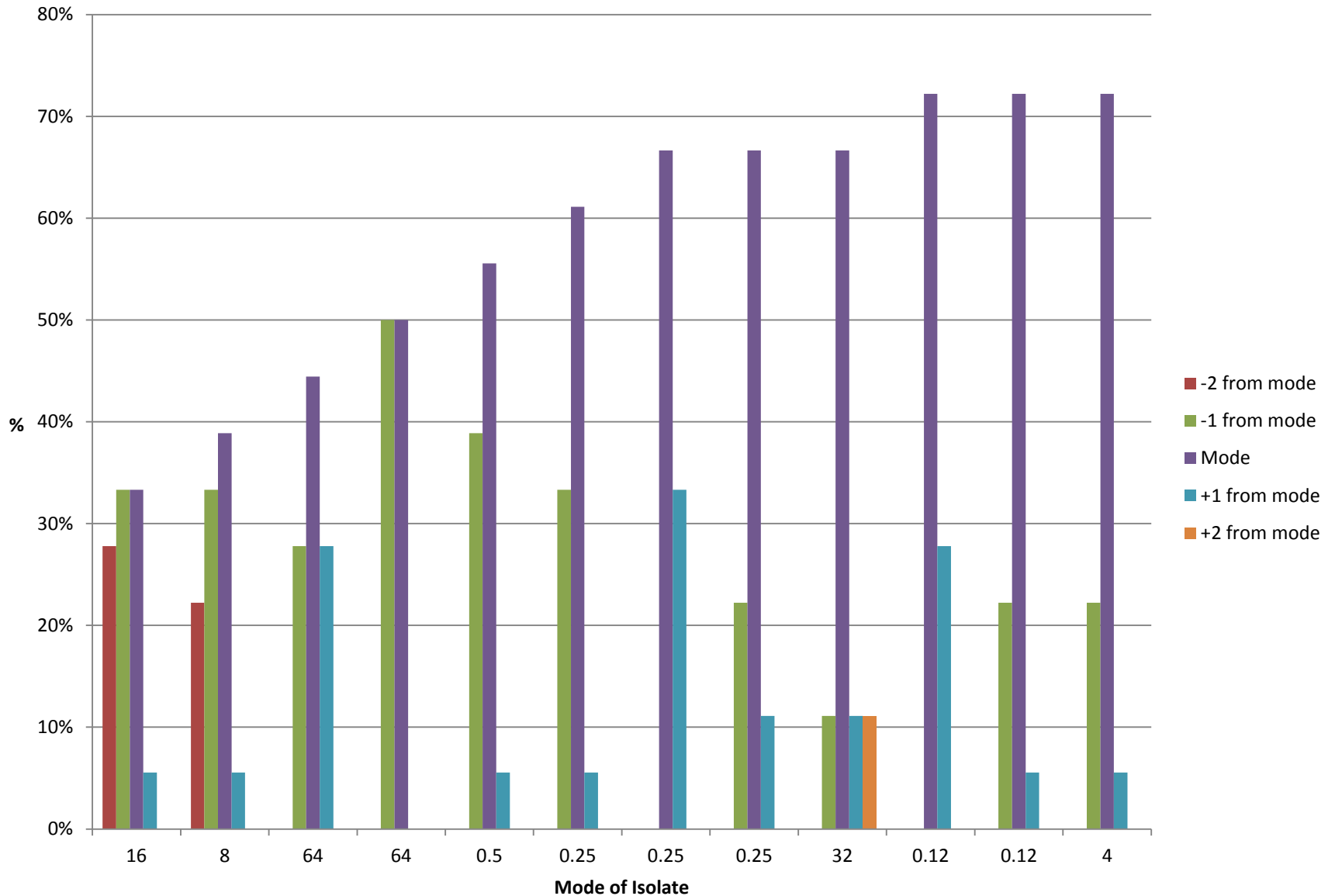
1. Identify the major (and minor) contributors to variability in the reference BMD method.
2. Demonstrate how these affect the reproducibility of MIC results, and provide recommendations to improve upon them.

***Action Item: Prepare survey for labs using BMD, contact participants and initiate survey.***

# Clinical isolates - how variable?

- Histogram depiction of the variability of 28 *E. coli* clinical isolates to cefotaxime in broth microdilution panels (only 12 shown here in the interest of time)
  - tested 10 or more replicates of each isolate on reference panels *made and inoculated per CLSI recommendations*.
  - the modal MIC for each isolate is on the X-axis.
  - test conditions were well-controlled.
- Takeaway - while some are quite reproducible within 1-2 dilutions, many others are not! Yet the significance of clinical isolate variability is rarely considered, and may be more variable than QC strains.

# E. coli Isolates, Replicate Testing, Cefotaxime Distribution of MIC for each isolate around it's mode



# Summary

## I. Address goals using a 'two-track' plan (cont.)

- Track 2 - Dealing with Variability  
in MIC Testing – What to do with it?

*Action Item: Model and run simulations on microbroth AST testing data (clinical isolates). Establish recommendations. Work with M-23 WG.*

## II. Recent documentation updates to reading MIC endpoints

- Examined current recommendations in M07, Section 10.7, pertaining to MIC interpretation when trailing, skips, etc., are evident.

*Action Item: Would like to clarify these, and also provide guidance to the user with pictures that depict several examples that lead to variability.*

# MIC End Point Determination

