**Abstract**

**Background:** This study followed the CLSI M31-A3 (2003) guideline for establishing MIC quality control (QC) ranges for CLSI reference and 18S rRNA-based nucleic acid amplification methods. Testing of the most relevant respiratory and skin infection pathogens, including *Staphylococcus aureus* and *Haemophilus influenzae* against multidrug-resistant (MDR) respiratory and skin infection pathogens, was performed by a panel of 11 laboratories. GSK132232 demonstrates antibacterial activity against multidrug-resistant community-acquired respiratory and cutaneous infection pathogens, including MRSA, and represents a new antimicrobial class with a novel mode of action.

**Methods:** CLSI BMD methods were utilized in an eight laboratory study design compliant with M23-A3 specifications. Three QC strains were tested (S. aureus ATCC 29213, H. influenzae ATCC 49247, and *S. pneumoniae* ATCC 49619) using four media (three commercial media, *S. pneumoniae* ATCC 49619 and *H. influenzae* ATCC 49247 broth media lots produced by Difco Laboratories (Detroit, MI), four lots of Mueller-Hinton (MH) broth media lots produced by Difco Laboratories (Detroit, MI), and three antimicrobial control agents. The results are presented as geometric mean MICs.

**Conclusions:** Proposed MIC QC ranges for GSK132232 will guide clinical laboratories in selecting appropriate testing approaches for *S. pneumoniae* and *H. influenzae* against MDR respiratory and skin infection pathogens, including MRSA, and renders GSK132232 an option for infections caused by MDR staphylococci, *S. pneumoniae* ATCC 49619, and *S. aureus* ATCC 29213.

**Keywords:** GSK132232, Acinetobacter baumannii, Acinetobacter nosocomialis, *Staphylococcus aureus*, *Haemophilus influenzae*, quality control range, *Streptococcus pneumoniae*, broth microdilution, MIC, CLSI M23-A3, CLSI BMD, antibacterial activity, multidrug-resistant pathogens, MRSA, MDR staphylococci, antimicrobial therapy, subcommittee as stated here.

**Results:**

<table>
<thead>
<tr>
<th>QC Strain</th>
<th>MIC Ranges (µg/ml)</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>S. aureus</em> ATCC 29213</td>
<td>0.12 – 0.5</td>
<td>0.11 – 0.55</td>
</tr>
<tr>
<td><em>H. influenzae</em> ATCC 49247</td>
<td>0.5 – 4</td>
<td>0.47 – 4.24</td>
</tr>
</tbody>
</table>

**Results-Continued**

<table>
<thead>
<tr>
<th>QC Strain</th>
<th>MIC Ranges (µg/ml)</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>S. pneumoniae</em> ATCC 49619</td>
<td>0.25 – 1</td>
<td>0.23 – 1.06</td>
</tr>
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</table>

**Figures 1 – 3.**

**Table 1.** Media lot comparisons and inter- and intra-laboratory comparisons of GSK132232 MIC results versus *S. pneumoniae* ATCC 29213 with 16-20 hour incubation.

**Table 2.** Proposed GSK132232 broth microdilution MIC quality control ranges.

**Figures 1 – 3.**

**Table 2.** Proposed GSK132232 broth microdilution MIC quality control ranges.

**Acknowledgements**

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**References**


**Conclusions**

This study established QC ranges that can be utilized to support accurate testing for susceptibility to GSK132232 during clinical trials and continued product development.

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