**Introduction**

AAI101 is a novel β-lactam inhibitor (Figure 1) highly active against extended-spectrum β-lactamases (ESBLs) in the absence of β-lactamase resistance to otherβ-lactam antibiotics.

The combination of cefepime-AAI101 has completed Phase 2 clinical trials for acne.

**Materials and Methods**

- **Materials**
  - Four cephalosporins were chosen for both infection and treatment breakpoints (Tier 1) and for both Tier 2 sets of breakpoints.
  - EUCAST MIC breakpoints for cefepime, meropenem, piperacillin-tazobactam, and/or AAI101 were applied to cefepime-AAI101.
  - Fixed cefepime breakpoint interpretive criteria were applied to cefepime-AAI101.

- **Methods**
  - Zone diameter breakpoints were generated according to CLSI guidelines (M07-A10).
  - For comparison purposes, cefepime breakpoint interpretive criteria were applied to cefepime-AAI101.
  - The combination of cefepime-AAI101 recently has completed Phase 2 clinical trials for acne.

**Results**

Table 1: Cumulative percent inhibition results for cefepime-AAI101 (fixed AAI101 concentrations of 4 µg/mL and 8 µg/mL) and comparators against a challenge set of 58 recent Enterobacteriaceae isolates (Tier 1).

<table>
<thead>
<tr>
<th>Microorganism</th>
<th>MIC (µg/mL)</th>
<th>Cefepime-AAI101 (fixed 4 µg/mL)</th>
<th>Cefepime-AAI101 (fixed 8 µg/mL)</th>
<th>Comparator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escherichia coli</td>
<td>0.012</td>
<td>70.6</td>
<td>100.0</td>
<td>70.6</td>
</tr>
<tr>
<td>K. pneumoniae</td>
<td>0.012</td>
<td>70.6</td>
<td>100.0</td>
<td>70.6</td>
</tr>
<tr>
<td>P. aeruginosa</td>
<td>0.012</td>
<td>70.6</td>
<td>100.0</td>
<td>70.6</td>
</tr>
<tr>
<td>P. stuartii</td>
<td>0.012</td>
<td>70.6</td>
<td>100.0</td>
<td>70.6</td>
</tr>
</tbody>
</table>

**Conclusions**

- **Proposed CLSI interpretive criteria** for cefepime-AI101 30/20 µg disks compared to cefepime 30/20 µg disks, zone diameter breakpoints.

- **Proposed EUCAST breakpoints** for cefepime-AI101 (Tier 1) and (Tier 2).

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**References**


