**In vitro Activity of Omadacycline and Comparators against Gram-Positive and -Negative Clinical Isolates (including resistant organism subsets) Collected in 2017 from Patients in European Medical Centers: SENTRY Surveillance Program Results**

**INTRODUCTION**

- Omadacycline is a new oxazolidinone/cyclolactone antibiotic for treating multi-drug resistant (MDR) infections. It recently completed Phase III clinical trials and is awaiting US FDA approval.
- The European Medicines Agency (EMA) is currently evaluating omadacycline for use in Europe.
- The objective of this study was to determine the in vitro activity of omadacycline against key clinical isolates collected in 2017 from patients in European medical centers participating in the SENTRY surveillance program.

**MATERIALS AND METHODS**

- A total of 9,288 isolates from 401 medical centers in 12 European countries were collected.
- Isolates were tested using the broth microdilution method according to CLSI (M07, 2018) and EUCAST (Version 8.0, 2018).
- The MIC50 and MIC90 were calculated for each species-group.

**RESULTS**

- Omadacycline demonstrated potent in vitro activity against fastidious organism groups, including Enterococcus faecalis, β-haemolytic streptococci, Enterobacteriaceae, and Staphylococcus aureus.
- Omadacycline was active against organisms with tetracycline-, penicillin/oxacillin-, fluoroquinolone-, and macrolide-resistance rates above 20%.
- Omadacycline was active against 50/90 ≤0.12/0.25 mg/L; Tables 1 and 2).

**CONCLUSIONS**

- Omadacycline demonstrated potent in vitro activity against key clinical isolates collected in 2017 from patients in European medical centers.
- Omadacycline was active against organisms with resistance rates above 20%.
- Omadacycline was active against fastidious organism groups, including Enterococcus faecalis, β-haemolytic streptococci, Enterobacteriaceae, and Staphylococcus aureus.

**ACKNOWLEDGEMENTS**

This work and all data provided in this paper were supported by a grant from the manufacturer of omadacycline, Pfizer Inc.

**REFERENCES**


ECCMID 2018 Poster #P1822

**RESULTS (cont)**

- Table 2: In vitro activity of omadacycline and comparator against staphylococci, streptococci, and enterococci from patients in European medical centers during 2017.

<table>
<thead>
<tr>
<th>Organism/organism</th>
<th>MIC50 (mg/L)</th>
<th>MIC90 (mg/L)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>S. aureus</td>
<td>0.06/0.12</td>
<td>≥0.12</td>
<td>≤0.5</td>
</tr>
<tr>
<td>S. pyogenes</td>
<td>0.06/0.12</td>
<td>≥0.12</td>
<td>≤0.5</td>
</tr>
<tr>
<td>S. pneumoniae</td>
<td>0.06/0.12</td>
<td>≥0.12</td>
<td>≤0.5</td>
</tr>
<tr>
<td>E. faecalis</td>
<td>0.06/0.12</td>
<td>≥0.12</td>
<td>≤0.5</td>
</tr>
<tr>
<td>E. faecium</td>
<td>0.06/0.12</td>
<td>≥0.12</td>
<td>≤0.5</td>
</tr>
<tr>
<td>P. mirabilis</td>
<td>0.06/0.12</td>
<td>≥0.12</td>
<td>≤0.5</td>
</tr>
<tr>
<td>E. gallinarum</td>
<td>0.06/0.12</td>
<td>≥0.12</td>
<td>≤0.5</td>
</tr>
<tr>
<td>H. influenzae</td>
<td>0.06/0.12</td>
<td>≥0.12</td>
<td>≤0.5</td>
</tr>
<tr>
<td>M. catarrhalis</td>
<td>0.06/0.12</td>
<td>≥0.12</td>
<td>≤0.5</td>
</tr>
</tbody>
</table>

**CONCLUSIONS (cont)**

- Omadacycline was active against fastidious organism groups, including Enterococcus faecalis, β-haemolytic streptococci, Enterobacteriaceae, and Staphylococcus aureus.
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