Hamsters were kept in a room maintained at 64-76° F (17.8-24° C). Material and methods: OMC was tested in vitro against 27 clinical isolates of *C. difficile* (Cd) using both broth microdilution and agar dilution methods according to CLSI guidelines. The efficacy of OMC was determined in the hamster model of *C. difficile* (CDV, Vancomycin, and Metronidazole). More data is available in Table 2.

**Table 2. Minimum Inhibitory Concentration (MIC) for Omadacycline and Tested Compounds in the infection Model**

<table>
<thead>
<tr>
<th>Compound</th>
<th>MIC (µg/mL)</th>
<th>Activity against <em>C. difficile</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clindamycin</td>
<td>0.06</td>
<td>Very active as tigecycline, metronidazole, and vancomycin (MIC = 0.06 µg/mL) by broth and 1 µg/mL by agar).</td>
</tr>
<tr>
<td>Omadacycline</td>
<td>0.06</td>
<td>More active than doxycycline (MIC = 0.5 µg/mL by broth and 1 µg/mL by agar).</td>
</tr>
<tr>
<td>Vancomycin</td>
<td>0.5</td>
<td>Against the infection model strain, omadacycline was as active as tigecycline, metronidazole, and vancomycin (MIC = 0.06 µg/mL for all drugs), while clindamycin exhibited no activity (Table 2).</td>
</tr>
</tbody>
</table>

**Results:**
- The MIC for omadacycline against Cd was 0.06 µg/mL, by broth dilution and 0.12 µg/mL, by agar dilution, and OMC was more active than doxycycline (MIC = 0.5 µg/mL by broth and 1 µg/mL by agar). Omadacycline was active against *C. difficile* as well as tigecycline, metronidazole, and vancomycin (MIC = 0.06 µg/mL for all drugs).
- Day 2 post infection, 100% of OMC-treated animals were alive, compared to 40% and 0% for vancomycin and vehicle control, respectively.
- In-vitro activity also was determined for clindamycin, tigecycline, vancomycin, and metronidazole.

**Data Analysis:**
- Kaplan–Meier survival analysis was performed with a staircase plot.
- The efficacy of omadacycline was determined in the hamster model of *C. difficile* and compared to vancomycin and metronidazole.
- Survival: Day 2 post infection, 100% of OMC-treated animals were alive, compared to 40% and 0% for vancomycin and vehicle control, respectively.
- In-vitro activity also was determined for clindamycin, tigecycline, vancomycin, and metronidazole.

**Materials and Methods:**
- OMC was tested in vitro against 27 clinical isolates of *C. difficile* (Cd) using both broth microdilution and agar microdilution methods according to CLSI guidelines. The efficacy of OMC was determined in the hamster model of *C. difficile* (CDV, Vancomycin, and Metronidazole). More data is available in Table 2.
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**Results:**
- The MIC for omadacycline against Cd was 0.06 µg/mL, by broth dilution and 0.12 µg/mL, by agar dilution (Table 2).
- Omadacycline was more active than doxycycline (MIC = 0.5 µg/mL by broth and 1 µg/mL by agar).
- Using a Log-Book analysis of data, p-values, significant difference in curves, and median survival were determined.

**Results:**
- The MIC for omadacycline against Cd was 0.06 µg/mL, by broth dilution and 0.12 µg/mL, by agar dilution (Table 2).
- There was a significant difference in survival curves between the groups (Table 2).
- Median survival for the OMC-treated animals was 12 days compared to 2 days for VAN.
- Overall, the median survival for omadacycline-treated animals was 12 days compared to 2 days for vancomycin and 4 days for the vehicle control (Figure 2).

**Figure 2:** Kaplan–Meier analysis of Percent Survival of *C. difficile* Infected With Cd After Treatment With Omadacycline and Comparators.

**Table 3. Median Survival For Hamsters After Treatment With Omadacycline and Comparators**

<table>
<thead>
<tr>
<th>Test Compound</th>
<th>Median Survival (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Omadacycline</td>
<td>12</td>
</tr>
<tr>
<td>Vancomycin</td>
<td>2</td>
</tr>
<tr>
<td>Vehicle</td>
<td>4</td>
</tr>
</tbody>
</table>

**Discussion:***
- OMC exhibited potent in vitro activity against *C. difficile* and efficacy in the hamster model of CDAD and might offer potential for the treatment of *C. difficile* infections.

**References:**

**Figure 2:** Kaplan–Meier analysis of Percent Survival of *C. difficile* Infected With Cd After Treatment With Omadacycline and Comparators.