





# Omadacycline Activity vs. CDC Urgent Antibiotic Resistance Threats

HAZARD LEVEL  
**URGENT**



These are high-consequence antibiotic-resistant threats because of significant risks identified across several criteria. These threats may not be currently widespread but have the potential to become so and require urgent public health attention to identify infections and to limit transmission.

Urgent Threats	Omadacycline In-vitro Activity	Omadacycline Clinical Potential
<i>Clostridium difficile</i>	 In-vitro activity demonstrated <sup>(1,2)</sup>	While not pursuing Omadacycline as a treatment, pre-clinical data suggest a low potential for OMC to induce <i>C.difficile</i> infection <sup>(1,2)</sup>
Carbapenem-resistant Enterobacteriaceae (CRE)	 <i>E. coli</i> <sup>(3)</sup>	Phase 1b UTI proof of principle trial complete
	 Limited activity vs. <i>K. pneumoniae</i> <sup>(4)</sup>	
Drug-resistant <i>Neisseria gonorrhoeae</i>	 Further evaluation required <sup>(5)</sup>	

# Omadacycline Activity vs. CDC Serious Antibiotic Resistance Threats

HAZARD LEVEL

**SERIOUS**



These are significant antibiotic-resistant threats. For varying reasons (e.g., low or declining domestic incidence or reasonable availability of therapeutic agents), they are not considered urgent, but these threats will worsen and may become urgent without ongoing public health monitoring and prevention activities.

<i>Serious Threats</i>	Omadacycline In-vitro Activity	Omadacycline Clinical Potential
Multidrug-resistant <i>Acinetobacter</i>	? Further evaluation required	
Drug-resistant <i>Campylobacter</i>	? Further evaluation required	
Fluconazole-resistant <i>Candida</i>	✗ No activity	
Extended spectrum $\beta$ -lactamase producing Enterobacteriaceae (ESBLs)	✓ In-vitro activity demonstrated <sup>(6,9)</sup>	Phase 1b UTI proof of principle trial complete
Vancomycin-resistant <i>Enterococcus</i> (VRE)	✓ In-vitro activity demonstrated <sup>(7,8)</sup>	
Multidrug-resistant <i>Pseudomonas aeruginosa</i>	✗ No activity	







# Omadacycline Activity vs. CDC Serious Antibiotic Resistance Threats

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**SERIOUS**



These are significant antibiotic-resistant threats. For varying reasons (e.g., low or declining domestic incidence or reasonable availability of therapeutic agents), they are not considered urgent, but these threats will worsen and may become urgent without ongoing public health monitoring and prevention activities.




<i>Serious Threats (cont.)</i>	Omadacycline In-vitro Activity	Omadacycline Clinical Potential
Drug-resistant Non-typhoidal <i>Salmonella</i>	 In-vitro activity demonstrated <sup>(3)</sup>	
Drug-resistant <i>Salmonella</i> Typhi	 In-vitro activity demonstrated <sup>(3)</sup>	
Drug-resistant <i>Shigella</i>	 Further evaluation required	
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	 In-vitro activity demonstrated <sup>(6,7,8,9)</sup>	Phase 3 trial in ABSSSI complete
Drug-resistant <i>Streptococcus pneumoniae</i>	 In-vitro activity demonstrated <sup>(7,8,9)</sup>	Phase 3 trial in CABP currently underway
Drug-resistant tuberculosis	 Further evaluation required	

# Omadacycline Activity vs. CDC Concerning Antibiotic Resistance Threats

## HAZARD LEVEL CONCERNING



These are bacteria for which the threat of antibiotic resistance is low, and/or there are multiple therapeutic options for resistant infections. These bacterial pathogens cause severe illness. Threats in this category require monitoring and in some cases rapid incident or outbreak response.

<i>Concerning Threats</i>	Omadacycline In-vitro Activity	Omadacycline Clinical Potential
Vancomycin-resistant <i>Staphylococcus aureus</i> (VRSA)	 In-vitro activity demonstrated <sup>(10)</sup>	
Erythromycin-resistant Group A <i>Streptococcus</i>	 In-vitro activity demonstrated <sup>(6)</sup>	Phase 3 trial in ABSSSI complete
Clindamycin-resistant Group B <i>Streptococcus</i>	 In-vitro activity demonstrated <sup>(6)</sup>	Phase 3 trial in ABSSSI complete

# References

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