Kansas State University Research Foundation
TECHNOLOGY LICENSING PROFILE

Bacterial glycosyltransferase inhibitors as anti-virulence compounds

REF. NO. 2018-068

INVENTOR(S): P.R. HARDWIDGE, S. EL QAIDI, A. ROY, C. PERERA, and T. PRISINZANO

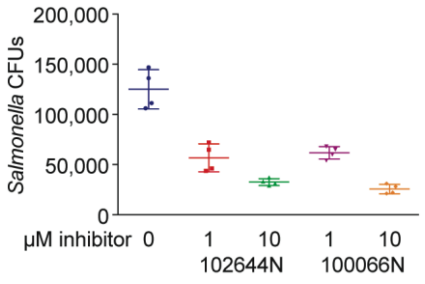
Description: NleB1 is an important virulence factor expressed by multiple bacteria including enterohemorrhagic *Escherichia coli* (EHEC), enteropathogenic *E. coli* (EPEC), and *Salmonella enterica*. These bacteria are of significance to human health as they all cause infectious diarrhea. EHEC causes hemorrhagic colitis and hemolytic uremic syndrome. Researchers at Kansas State University, in collaboration with researchers at University of Kansas, have characterized the NleB1 glycosyltransferase because of its proven importance to human *E. coli* infections. They have since shown that inhibiting NleB1 activity may be efficacious in preventing and treating bacterial infections. Two NleB1 inhibitors were identified using an optimized high-throughput screening (HTS) assay. These compounds do not inhibit the mammalian glycosyltransferase OGT. These NleB1 inhibitors may have utility as anti-virulence compounds.

Advantages:

- Toxicity – Compounds do not appear to be toxic to mammalian cells
- Inhibition - These compounds do not inhibit the mammalian glycosyltransferase OGT
- Treatment - These compounds, or their chemical derivatives, have utility in preventing and/or treating *E. coli* and *Salmonella* infections.

Applications:

- Treatment of bacterial infections
- Hemorrhagic colitis
- Hemolytic uremic syndrome



Patent Status: Pending

2005 Research Park Circle, Manhattan, KS 66502
785.532.1366
caronda@ksu.edu

Caronda Moore
Licensing Associate