Cover Picture

David J. McNally*, Ian C. Schoenhofen, R. Scott Houliston, Nam H. Khieu, Dennis M. Whitfield, Susan M. Logan, Harold C. Jarrell, and Jean-Robert Brisson

The cover picture shows the six enzymes (Pse B, C, H, G, I, F) responsible for producing CMP-pseudaminic acid (CMP-Pse) starting from UDP-GlcNAc in *Campylobacter jejuni* and *Helicobacter pylori*. These pathogens modify their flagella with sialic acid-like sugars such as pseudaminic acid (Pse) which are required for flagellar assembly, motility, and hence virulence. Pse B plays a central role in Pse biosynthesis and is also thought to be implicated in other glycan pathways making it a prime therapeutic target. Saturation transfer difference nuclear magnetic resonance spectroscopy (STD NMR) was used to determine binding epitopes for Pse B and to characterize Pse B inhibition with CMP-Pse at the molecular level. Docking studies and CORCEMA calculations validated STD NMR results and revealed that CMP-Pse and UDP-GlcNAc adopt similar conformations within the Pse B active site. These findings will guide the development of small-molecule inhibitors as a means to pharmaceutically control *C. jejuni* and *H. pylori* infections. For details, see the Communication by D. J. McNally, et al. on p. 55 ff.

