

*Helicobacter pylori* is a member of the Epsilonproteobacteria that colonizes the gastric mucosa of about half of the human population worldwide. Host colonization by *H. pylori* requires flagellum-mediated motility, which the bacterium achieves through a cluster of flagella at one cell pole. The *H. pylori* flagellum is surrounded by a membranous sheath that is contiguous with the outer membrane. Recent studies in my lab suggest that the anionic glycerophospholipid cardiolipin (CL) is required for flagellar biogenesis in *H. pylori*. The CL molecule is conical in shape and has an intrinsic curvature ( $\sim 1\text{-}5\text{ nm}^{-1}$ ) that favors localization of CL in negatively curved regions of bacterial membranes, such as the cell poles and septa in rod-shaped bacteria. We postulate that CL is incorporated into the *H. pylori* flagellar sheath, a membrane that has a considerable degree of intrinsic curvature, and that CL is required for biosynthesis of the flagellar sheath. In my seminar, I will present the results of our recent studies on the role of CL in biosynthesis of the flagellum and flagellar sheath.