

## **Inhibition of Bacterial Toxin Delivery as an Anti-Virulence Strategy**

### ***Abstract***

The rise of antibiotic resistance has necessitated the development of new approaches to treat bacterial illnesses. One approach that we and others have pursued is to inhibit specific molecules that provide pathogenic bacteria with advantages over the host and other bacteria. In particular, we focus on understanding how bacterial toxins are released by the bacteria and delivered to host cells so that we can engineer targeted treatments to inhibit the activity of these proteins as a way of decreasing the virulence of the bacteria, making them more susceptible to natural clearance mechanisms. In this presentation, I will discuss our studies of the mechanisms of toxin delivery, focusing on how they have informed our design and application of targeted toxin inhibitors.

### ***Bio***

Angela Brown is an Assistant Professor in the Department of Chemical and Biomolecular Engineering at Lehigh University. Dr. Brown received her B.S. in Chemical Engineering from Penn State University and her Ph.D. in Chemical Engineering from Drexel University in 2008. After her postdoctoral training at the University of Pennsylvania, Dr. Brown joined the faculty of Lehigh University in the Department of Chemical and Biomolecular Engineering in 2014. She is the recipient of an NSF CAREER award and an NIH Pathways to Independence Award (K99/R00).