Oklahoma COBRE in Structural Biology

Open to the public

Co-hosted by the OU COBRE in Structural Biology
and the Department of Chemistry and Biochemistry

We are Pleased to Announce a Seminar
Presented by

Dr. Clarissa Durie

University of Missouri

Friday, Feb 3rd 2023
4 pm
Stephenson Life Sciences Research Center 3410/3430

"Structure & Function of the *Legionella pneumophila* Dot/Icm Type IV Secretion System"

Refreshments at 3:45pm

Bacterial secretion systems, including the Dot/Icm Type IV Secretion System (T4SS) in the pathogen *Legionella pneumophila*, are macromolecular machines that deliver proteins and DNA directly into the cytoplasm of host cells to aid in colonizing hosts, transferring antibiotic resistance genes between bacteria, and forming biofilms. High resolution structures determined by cryo-electron microscopy of this ~5 MDa complex revealed many unexpected structural features. Our work integrates biochemical, biophysical, structural, and genetic approaches to develop a mechanistic model for how the protein-translocating *Legionella pneumophila* Dot/Icm T4SS delivers effector proteins into host cells during pathogenesis.

https://cafnr.missouri.edu/person/clarissa-durie/