

Abstract of Presentation

Presentation Title:

Mechanisms participating in the biogenesis of the type III secretion system of enteropathogenic *Escherichia coli*

Abstract:

Enteropathogenic *Escherichia coli* (EPEC) is a human pathogen which colonizes the intestine causing severe diarrhea, especially among children in developing countries. EPEC utilizes a type three secretion system (T3SS) to translocate effector proteins directly from the bacterial cytoplasm into the host cell cytosol, subverting signaling pathways and the host cell actin cytoskeleton. The T3SS or injectisome is a macromolecular structure composed of more than 20 proteins that transverse the bacterial cell envelope. It is composed of a multiring base that spans both membranes, and extends a needle-like and a filamentous structure that protrudes out of the cell. A central channel within this structure functions as a conduit for the translocation of effectors into enterocyte cells.

We will present experiments aiming at the understanding of T3SS biogenesis. We have been studying two enzymes: an ATPase that energizes the secretion process and a muramidase that participates in efficient injectisome assembly.