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Structure based analysis of the type III secretion injectisome

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Bacteria have evolved several dedicated and sophisticated assemblies to transport proteins across their biological membranes. Recent advances in our understanding of the molecular details governing the specific actions of these protein secretion systems has benefited from an integrated x-ray crystallography, NMR, mass spectroscopy, electron microscopy, and Rosetta-based molecular modeling toolbox. Highlights of recent advances in our piece wise structure/function analysis of the Type III Secretion system "injectisome" will be presented. A molecular understanding of the Type III systems being garnered from these studies provides the foundation for the development of new classes of vaccines and antimicrobials to combat infection in the clinic and community.

Keywords: [macromolecular machine](#), [membrane spanning](#), [bacterial pathogenicity](#)