

GHI Seminar

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Structure, function and dynamics of Type VI secretion system

The bacterial Type VI secretion system (T6SS) is a large dynamic organelle that is functionally analogous to contractile tails of bacteriophages. T6SS is used by Gram-negative bacteria to inhibit adjacent cells via translocation of toxic effector proteins and thus play an important role in bacterial ecology. We used time-lapse fluorescence light microscopy to describe dynamics of *Vibrio cholerae* T6SS. We showed that T6SS sheath, which powers the secretion, cycles between assembly, quick contraction, and disassembly. Single cell analysis of subcellular localization of T6SS assembly in *Pseudomonas aeruginosa* revealed that its T6SS organelle is assembled and aimed to specifically retaliate against attacks by other bacteria. I will present latest update on the structure, function and dynamics of T6SS as well on mechanisms of effector delivery.

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12h15, SV 1717a