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Articles of Significant Interest in This Issue

Agrobacterium tumefaciens Deploys a Versatile Antibacterial Strategy To Increase Its Competitiveness

The type VI secretion system is a widespread antibacterial weapon in gram-negative bacteria. Through *Agrobacterium tumefaciens*, Yu et al. (e00490-20) illustrated the rationale of having multiple types of effectors in a bacterial species. *A. tumefaciens* C58 contains a peptidogylcan amidase effector, Tae, that is effective only to target cells in growing status and DNase effectors Tde1/2 that are dominant under carbon starvation. Tae is highly conserved while Tde effectors are replaceable with other effectors in different genomospecies. The combination of Tae and other variable effectors is believed to help the agrobacteria to maintain competitiveness in variable environmental conditions.

Gluconacetobacter hansenii Uses a Cytoskeletal Element To Guide the Assembly of Its Cellulose Ribbon

Gluconacetobacter hansenii is the model system for the study of crystalline cellulose production. It has the unique ability to produce biofilms of biotechnological interest full of highly crystalline cellulose. Nicolas et al. (e00371-20) observed *G. hansenii in situ* and in a near-native state by electron cryotomography. They found a previously unknown cortical cytoskeletal element that allows the formation of the cellulose ribbon, presumably by lining up membrane-bound cellulose synthase complexes. This work provides an explanation of how the extrusion sites are aligned so as to make an organized cellulose ribbon.

A New Role for Phage Tail Fiber Assembly Proteins

The design of optimal phages for therapeutic purposes, such as treatment of antibiotic-resistant infections, requires the ability to precisely engineer phage host range. Tail fibers are key determinants of phage host range, and tail fiber assembly (Tfa) proteins serve as chaperones for the assembly of these complex structures. North and Davidson (e00406-20) show that some Tfa proteins, which are components of the phage particle, specifically bind to lipopolysaccharide, the cell surface receptor for many phages. This finding reveals a new function for Tfa proteins and opens up the potential to manipulate phage host range through engineering of Tfa proteins.

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