



Articles of Significant Interest in This Issue

O-Antigen-Dependent Colicin Insensitivity of Uropathogenic *Escherichia coli* Explained

Sharp et al. (e00545-18) use transposon sequencing, phenotypic microarrays, fluorescence microscopy, and growth inhibition assays to solve a long-standing mystery in microbiology: why are pathogenic *Escherichia coli* strains apparently insensitive to colicins even though they encode the cell envelope machinery targeted by colicins and do not express immunity genes? The answer turns out to be the density of O-antigen attached to their lipopolysaccharides in the outer membrane, which hinders access to colicin receptors. The authors also show that colicin insensitivity is a function of growth condition. Conditions that impact O-antigen density prevent the occlusion of receptors and can bypass the insensitivity.

Role of a LysM Domain in Bacterial Spore Morphogenesis

LysM protein domains are found in virtually all organisms, with the exception of the archaea, and bind polymers containing *N*-acetylglucosamine, which is present in chitin and in peptidoglycan (PG). Pereira et al. (e00642-18) show that the LysM domain of coat protein SafA from *Bacillus subtilis* is a protein-protein interaction module during the early stages of the spore assembly and a PG-binding module at late stages in morphogenesis. The first function recruits SafA to the surface of the developing spore, while the latter enforces the connection between the cortex (a PG layer) and the coat (a proteinaceous layer) of the spore.