

Type IV B pili are required for invasion but not for adhesion of *Salmonella enterica* serovar Typhi into BHK epithelial cells in a cystic fibrosis transmembrane conductance regulator-independent manner

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The cystic fibrosis transmembrane conductance regulator (CFTR) has been proposed as an epithelial cell receptor for the entry of *Salmonella* Typhi but not *Salmonella* Typhimurium. The bacterial ligand recognized by CFTR is thought to reside either in the *S. Typhi* lipopolysaccharide core region or in the type IV pili. Here, we assessed the ability of virulent strains of *S. Typhi* and *S. Typhimurium* to adhere to and invade BHK epithelial cells expressing either the wild-type CFTR protein or the Δ F508 CFTR mutant. Both *S. Typhi* and *S. Typhimurium* invaded the epithelial cells in a CFTR-independent fashion. Furthermore and also in a CFTR-independent manner, a *S. Typhi* pilS mutant adhered normally to BHK cells but displayed a 50% reduction in invasion as compared to wild-type bacteria. Immunofluorescence microscopy revealed that bacteria and CFTR do not colocalize at the epithelial cell surface. Together, our results strongly argue against the established dogma that CFTR is a receptor for entry