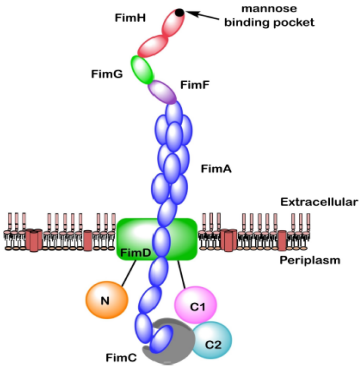
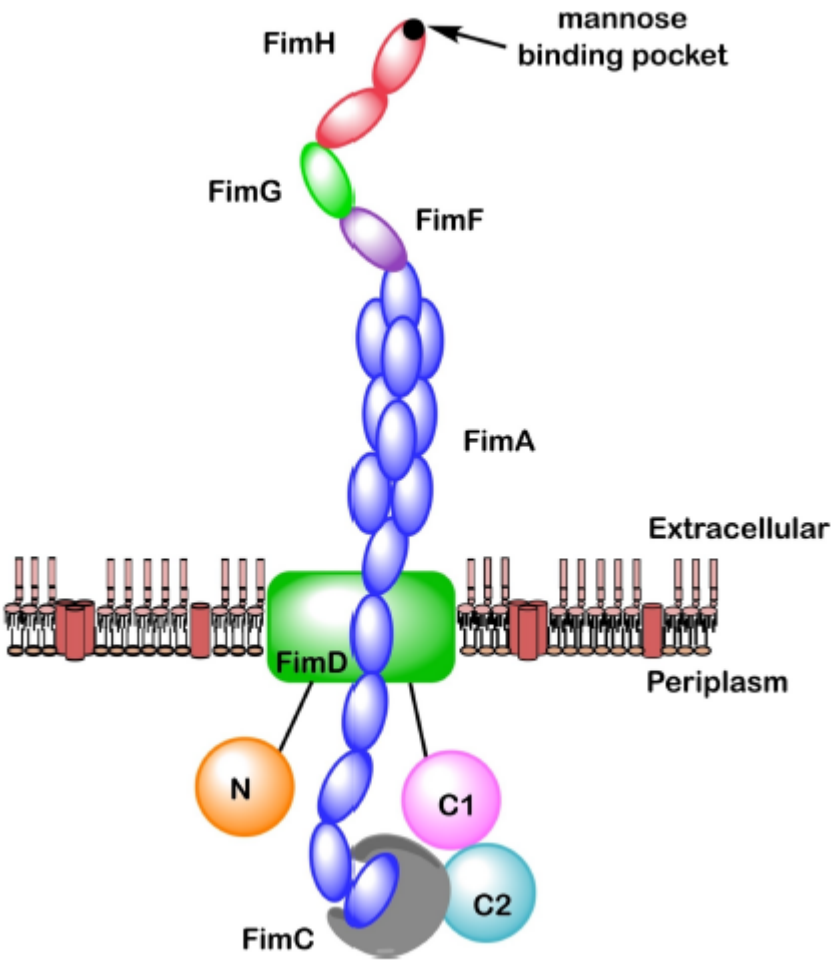


Developments in Mannose-Based Treatments for Uropathogenic Escherichia coli-Induced Urinary Tract Infections

Description



During their lifetime almost half of the women will experience a symptomatic urinary tract infection (UTI)

with a further half experiencing a relapse within six months. Currently UTIs with antibiotics, but increasing antibiotic resistance rates highlight the need for new treatments. Uropathogenic Escherichia coli (UPEC) is responsible for the majority of symptomatic UTI cases and thus has become a key pathological target. Adhesion of type one pilus subunit FimH at the surface of UPEC strains to mannose-saturated oligosaccharides located on the urothelium is critical to pathogenesis. Since the identification of FimH as a therapeutic target in the late 1980s, a substantial body of research has been generated focusing on the development of FimH-targeting mannose-based anti-adhesion therapies. The review discusses the design of different classes of these mannose-based compounds and their utility and potential as UPEC therapeutics.

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