

SI Guide:

**Supplementary Table 1: The phylogenetic relationships between F17 homologs as determined by comparing relatedness of bacterial usher gene sequences.**

This excel worksheet contains all of the sequence names and accession numbers used to generate the phylogeny presented in Extended Data Figure 4 (47 KB).

**Supplementary Table 2: The carriage of F17-like pili in rUTI UPEC strains.**

This excel worksheet contains all of the sequence names and corresponding BioProject IDs used to generate the phylogeny presented in Extended Data Figure 5. Accession numbers are currently being assigned to rUTI samples under BioProject ID: PRJNA269984 (50 KB).

**Supplementary Table 3: UclD X-ray crystallography data.**

This pdf contains data collection and refinement statistics for the UclD X-ray crystal structures (85 KB).