



**Fig S1. Experimental models of UTI.** A) Development of gastrointestinal and urinary colonization models using C3H/HeN mice have facilitated the study of a variety of host and bacterial virulence factors during UTI. In the gastrointestinal colonization model, elimination of colonization resistance is achieved using streptomycin treatment one day prior to oral gavage with UPEC. Streptomycin treatment in the setting of cystitis is not necessary. B) Murine model of simple, acute cystitis that if left untreated, may become chronic. C) Murine model of recurrent cystitis. Mice transurethrally infected with UTI89, a clinical UPEC isolate, experience one of two outcomes; chronic cystitis, or spontaneous resolution of the infection. Reinfection of these mice following a four-week period of convalescence demonstrates that mice that spontaneously resolved the infection were less susceptible to recurrence than those who developed a chronic infection after the initial challenge. D) Murine model of CAUTI using silicone tubing. E) Murine model of immunization prior to CAUTI development.