

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: GenBank accession numbers for 16s and MLST sequencing data.

File Name: Supplementary Movie 1

Description: *E. coli* ST782 switching from the rod to L-form state on osmoprotective medium in the presence of phosphomycin.

File Name: Supplementary Movie 2

Description: *E. coli* ST782 switching from the rod to L-form state on non-osmoprotective medium in the presence of phosphomycin.

File Name: Supplementary Movie 3

Description: *E. coli* ST782 switching from the L-form to rod state on osmoprotective medium.

File Name: Supplementary Movie 4

Description: *E. coli* ST144 switching from the rod to L-form state on osmoprotective medium in the presence of phosphomycin.

File Name: Supplementary Movie 5

Description: *E. coli* ST144 switching from the rod to L-form state on non-osmoprotective medium in the presence of phosphomycin.

File Name: Supplementary Movie 6

Description: *E. coli* ST144 switching from the L-form to rod state on osmoprotective medium.

File Name: Supplementary Movie 7

Description: *E. coli* ST144 switching from the rod to L-form state in urine in the presence of phosphomycin.

File Name: Supplementary Movie 8

Description: *E. coli* ST144-YFP switching from the rod to L-form state in a zebrafish larva.

File Name: Supplementary Movie 9

Description: *E. coli* ST144-YFP switching from the L-form to rod state in a zebrafish larva.

File Name: Supplementary Movie 10

Description: *E. coli* ST144-YFP division by binary fission in a zebrafish larva.