



Additional File 5

Trajectory patterns of isolated *E. aerogenes*. (a) An overview of isolated *E. aerogenes* in water suspension. Bacteria cells were isolated and diluted in water until reaching approximately 2000 cells/ μL . Bacteria cells were then confined in a microchamber in absence of potassium gradient. Isolated bacterial tracks ($n=69314$) displayed overall a confined movement with short and non-linear trajectories, probably consequential to Brownian motion (b). A consistent part of *E. aerogenes* cells at this time point of the culture did not display any trajectory, therefore appearing to be non-motile (c). Only singular individual appeared to be actively motile with longer trajectories characterized by higher mean speed recorded values (a). At the bottom of the image the corresponding mean speed bar for tracked trajectories varying from 0 to 20 $\mu\text{m/s}$. Three replicates were first obtained under 10x magnification, 0.044s frame interval and later analysed under Fiji environment. Scale bar: 52 μm