

Supplementary material

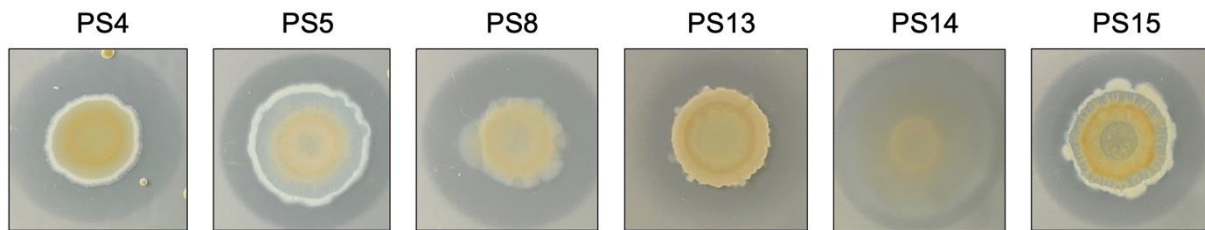


Figure S1: Different colony morphologies between isolates. (A) Single colony isolates of enriched strains found to be *P. stutzeri* from 16S rRNA sequencing, these have different colony morphology in colour, size and shape on 1% PCL agar plates, zones of clearance correspond to day 3 of Fig. 4A.

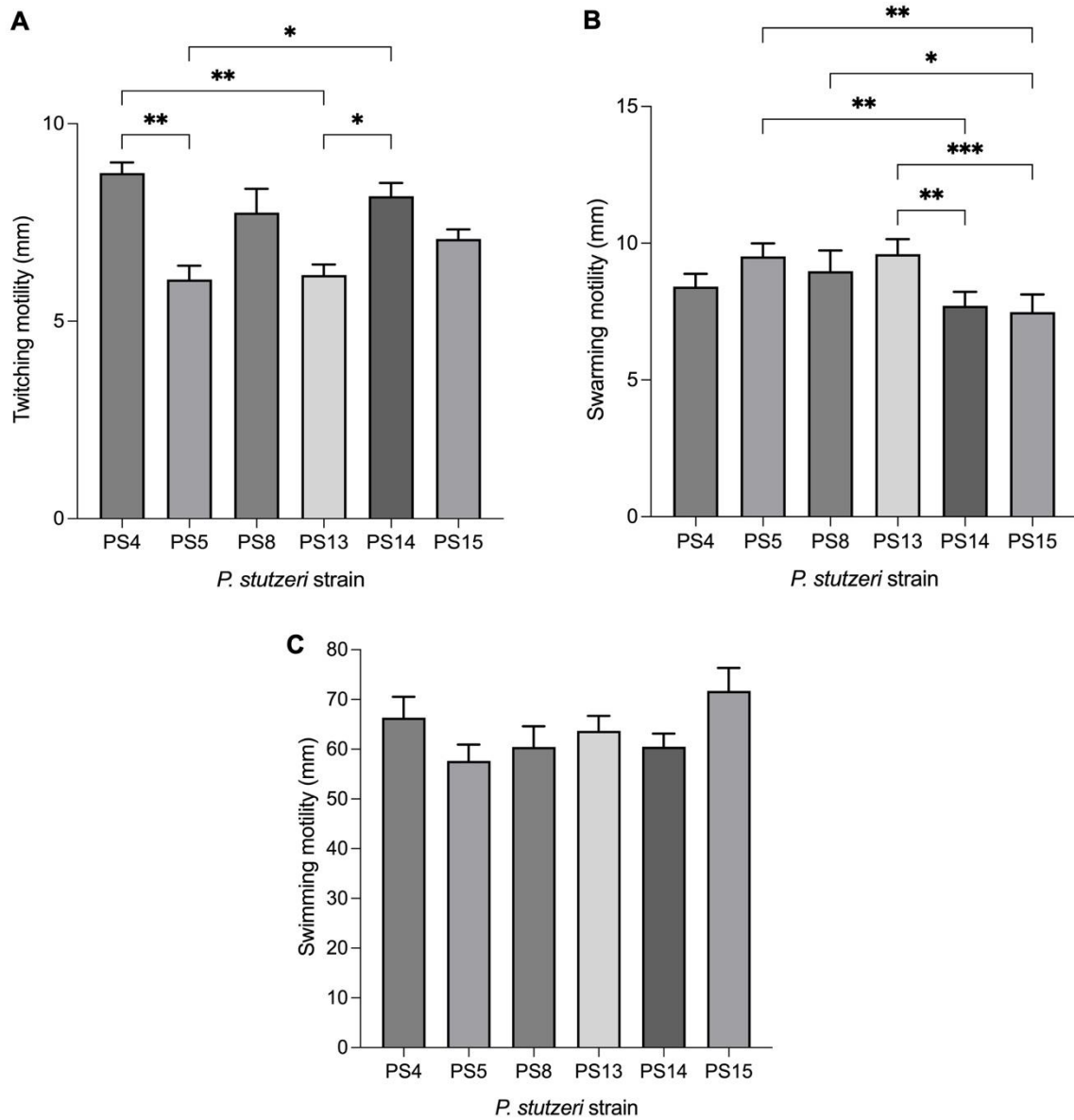


Figure S2: Motility assays of *P. stutzeri* isolates. (A) Twitching motility assay, mean and SD of 3 biological replicates, (B) swarming motility assay, mean and SD of 4 biological replicates, (C) swimming motility assay, mean and SD of 3 biological replicates. Each biological replicate consists of 3 technical replicates.

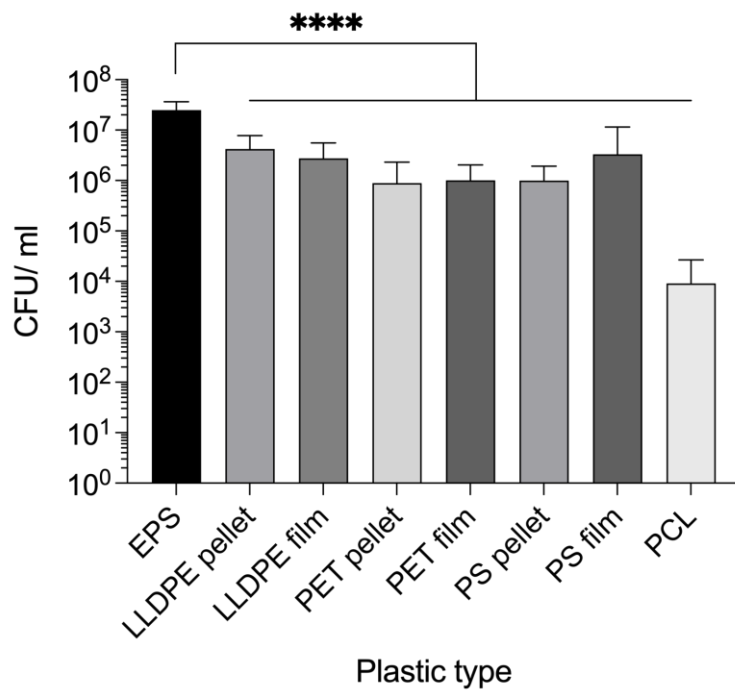


Figure S3: *P. stutzeri* attachment to different plastics. PS13 single isolate *P. stutzeri* attached significantly more to EPS than the other plastics tested. Mean and SD from 9 pieces of plastic from 3 advanced technical repeats of 3 biological repeats (6 pieces of plastic from 2 biological repeats for PCL), one-way ANOVA was performed with multiple comparisons, the difference between EPS and each of the other plastics was $p < 0.0001$.

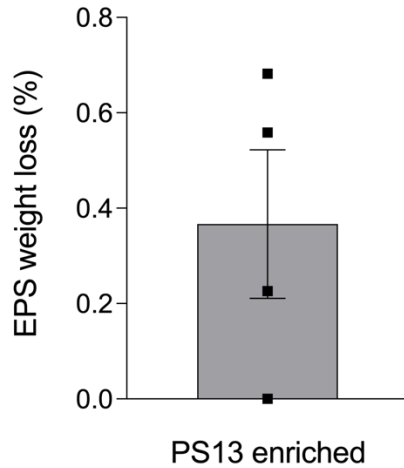


Figure S4: EPS weight loss assay. Overnight cultures of PS13 enriched communities were rinsed in PBS 3 times to remove nutrient rich media. OD_{600} 1 was inoculated into flasks of 15 mL of high-salt M9 minimal media with ~ 0.09 g of pure untreated EPS. Cultures were grown at room temperature with agitation for 77 days. The EPS was removed from the cultures, sonicated to remove attached bacteria, rinsed briefly in 2 % sodium dodecyl sulfate, rinsed with distilled water and dried before weighing. Mean and SEM of 4 advanced technical replicates. Whilst some weight loss was observed of the untreated EPS, due to the lightweight nature of EPS, the average weight loss of 0.37 % was only equivalent to less than 1 mg so was not deemed significant considering human and mechanical error with the weighing scales.

Table S1: Overall genome properties of PS13

Genome feature	PS13
Size (bp)	4610224
Number of contigs	12
Largest contig (bp)	1117968
N50	840153
L50	3
GC content (%)	62.92
Completeness (%)	100.0
Contamination (%)	0.14
Number of coding sequences	4291
Number of hypothetical proteins	1721