

SUPPLEMENTARY DATA

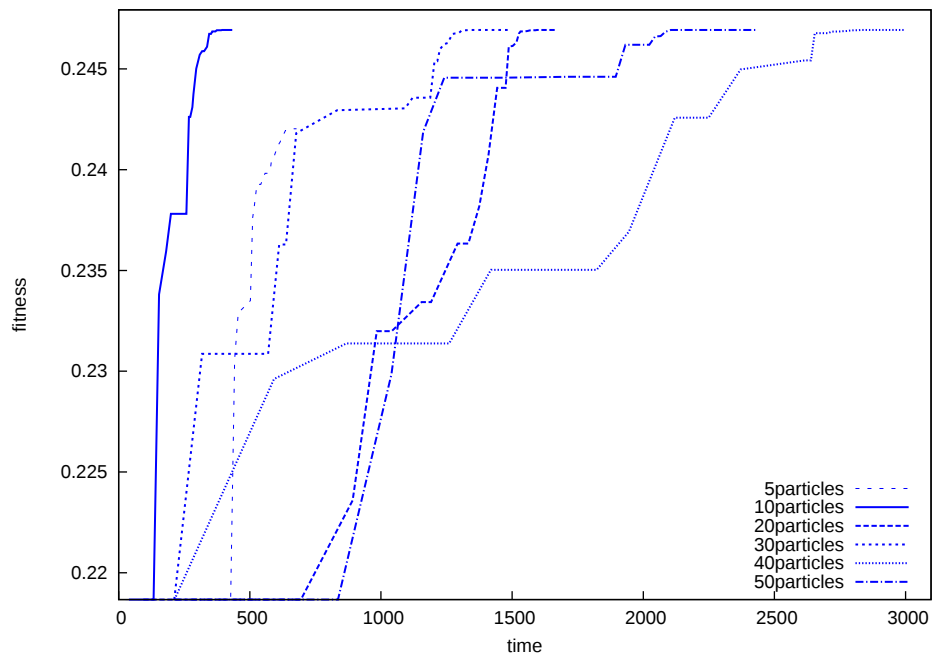


Figure S 1: **Comparison of runtimes for different swarm sizes.** The time taken for swarms of different sizes to reach the maximum fitness in the *E. coli* core model is plotted. It is clear that a size of 10 is faster than larger swarms and a smaller size of 5 fails to reach the optimum.