

## Supplementary information

**Figure S1.** Image of biofilm on sidewalls of (a) Reactor 2 and (b) Reactor 1.

**Figure S2.** Intracellular c-di-GMP levels in *R. palustris* near (a) the illuminated sidewall of Reactor 1 and (b) illuminated liquid surface of Reactor 2.

**Figure S3.** Representative micrographs of FISH performed on biofilm from PRBC1 and PRBC2 at day 30: all bacteria appear in blue (hybridised with DAPI) and *R. palustris* appear in red (hybridised with Rpal686-TAMRA)

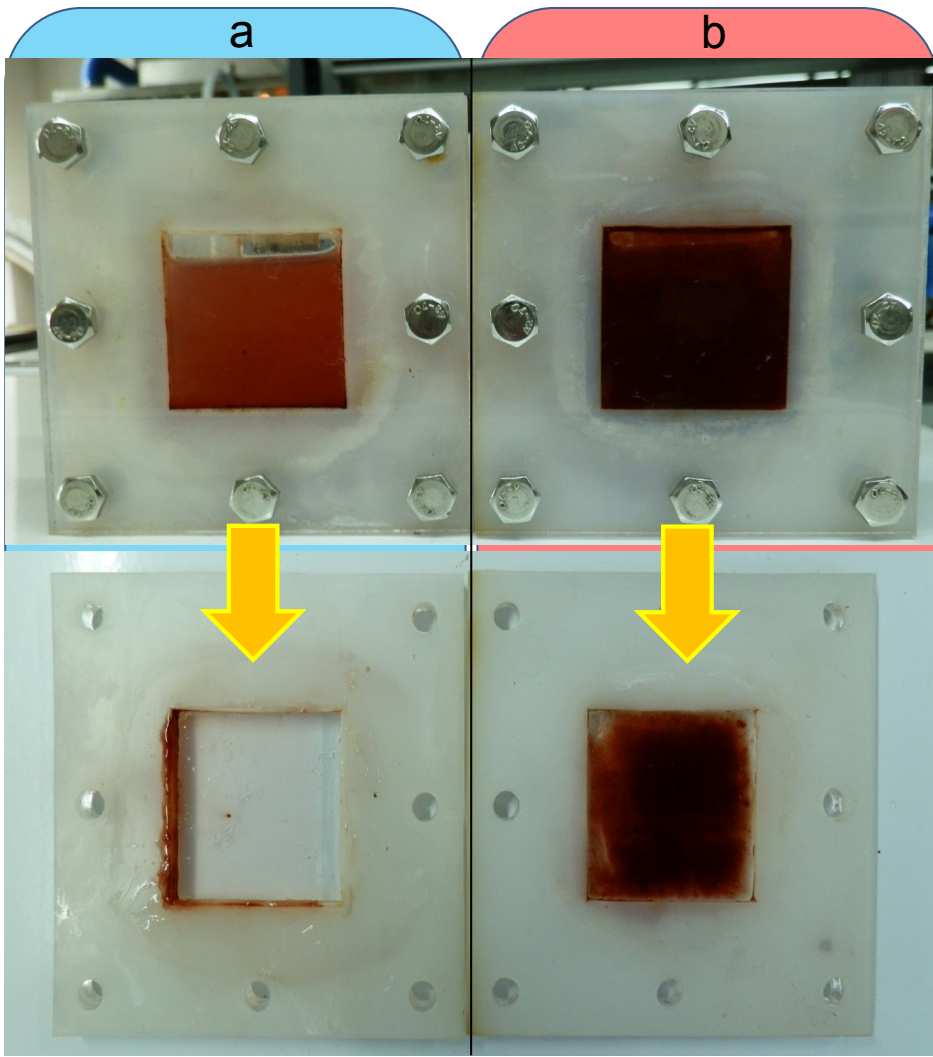


Figure S1. Image of biofilm on sidewalls of (a) Reactor 2 and (b) Reactor 1.

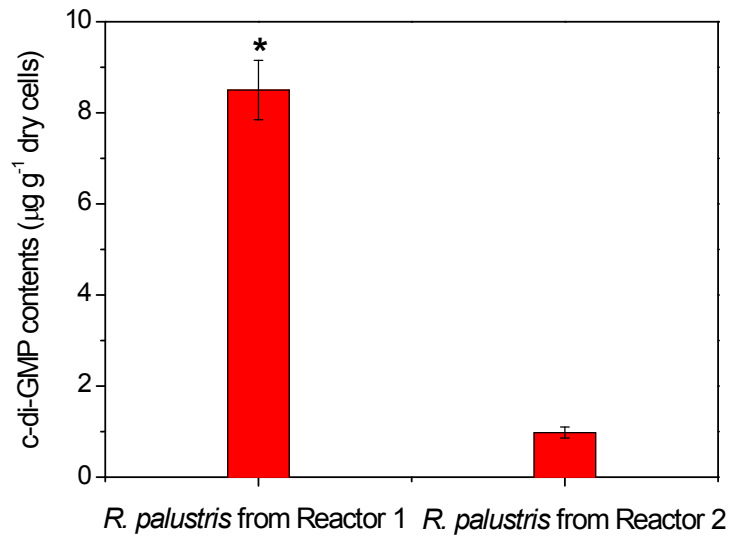


Figure S2. Intracellular c-di-GMP levels in *R. palustris* near (a) the illuminated sidewall of Reactor 1 and (b) liquid surface of Reactor 2 (\* $P < 0.05$ ).

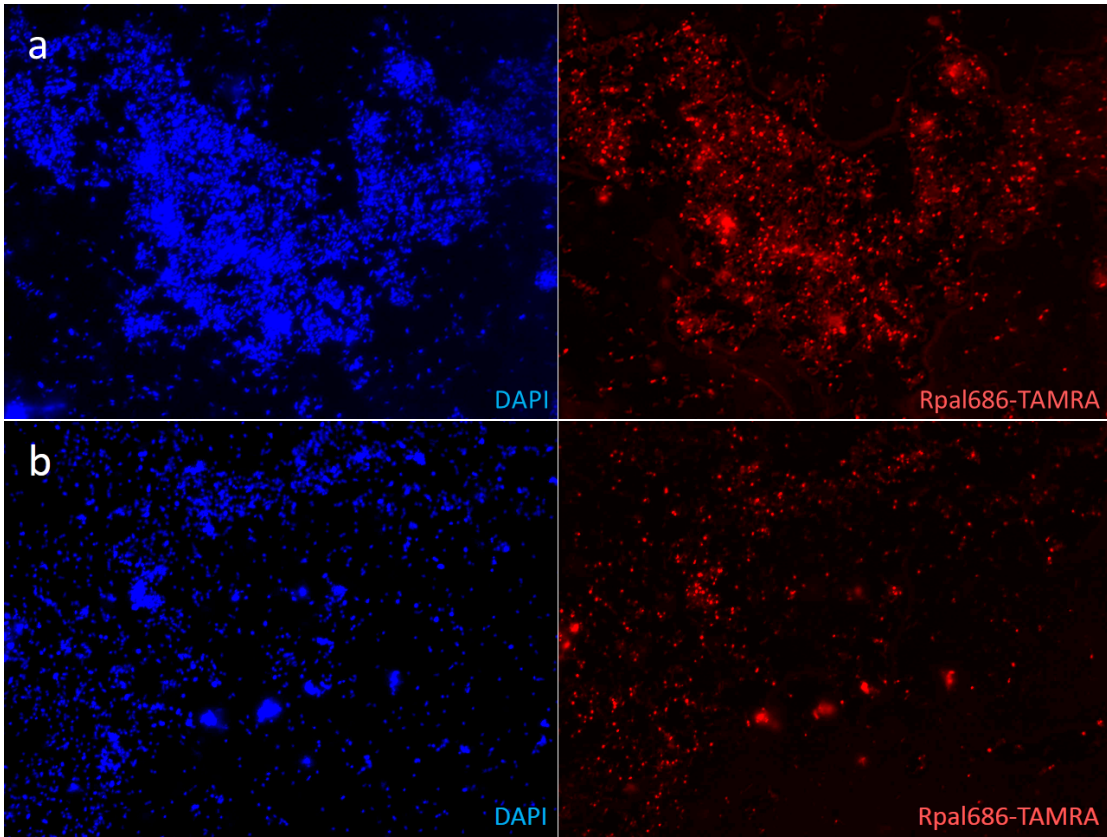


Figure S3. Representative micrographs of FISH performed on biofilm from PRBC1 and PRBC2 at day 30: all bacteria appear in blue (hybridized with DAPI) and *R. palustris* appear in red (hybridized with Rpal686-TAMRA)