

## Supplemental Figures S1-S3

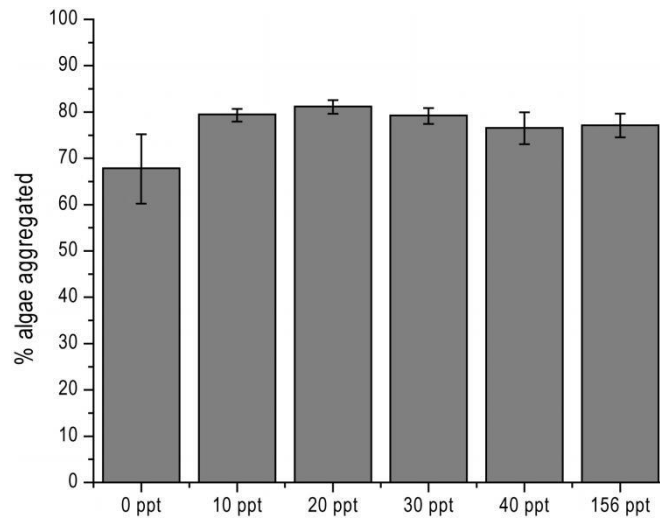


FIG S1 Aggregation is inhibited at low salinity and high salinity relative to the 20 ppt salinity used in the algal medium. Aggregation is significantly reduced at 0 ppt compared to 10 ppt salinity ( $p=0.002$ ) and 20 ppt ( $p=0.001$ ). Samples at 20, 30 and 40 ppt salinity are not significantly different ( $p>0.05$ ). A small but significant decrease in aggregation is observed between samples at 20 and 156 ppt salinity ( $p=0.002$ ). Bar and error bars represent the mean and standard error respectively of eight independent aggregation reactions. A value of 100% is aggregation of all algal cells.

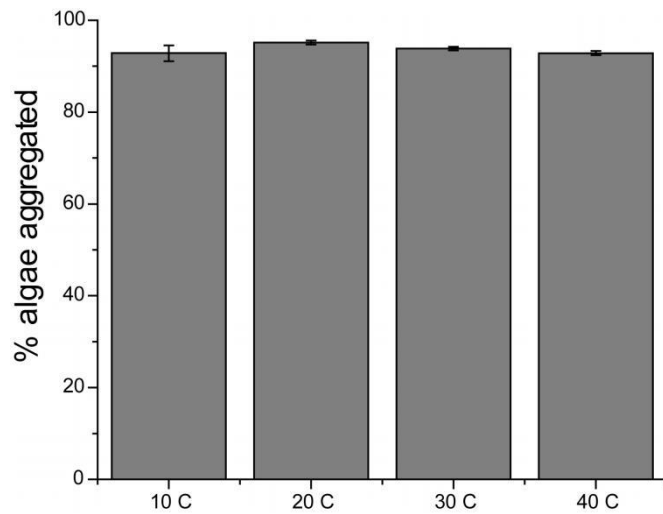


FIG S2 Temperature has minor but significant effects on aggregation. Aggregation is optimal at 20°C and is significantly higher at 20°C than 10°C ( $p=0.006$ ), 30°C ( $p=3.9E-5$ ) and 40°C ( $p=3.1E-7$ ). Bar and error bars represent the mean and standard error respectively of eight independent aggregation reactions. A value of 100% is aggregation of all algal cells.

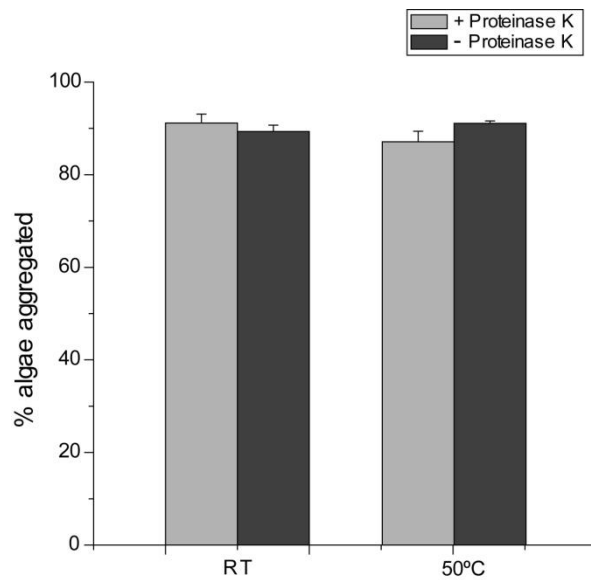


FIG S3 Aggregation with RP1137 cells who were treated with proteinase K to digest surface associated proteins. Cells incubated at room temperature (RT) with proteinase K do not have a statistically significant difference in aggregation efficiency compared to untreated control ( $p > 0.05$ ), while cells treated at 50°C show a minor but statistically significant decrease in aggregation efficiency ( $p = 0.002$ ) relative to the untreated control. Bar and error bars represent the mean and standard error respectively of eight independent aggregation reactions. A value of 100% is aggregation of all algal cells.