



**Supplementary Figure S1.** Arrhenius plots of the natural logarithm of the prokaryotic heterotrophic production ( $\ln$  PHP) against the inverse absolute temperature ( $1/T$ ) for a), c), e) thymidine and b), d), f) leucine production estimates in the epipelagic (0–200m) mesopelagic (201–1,000 m) and bathypelagic (1,001–4,000 m) samples. The error reported for the PHP grouped samples by 1°C bins represent the standard deviation. Solid lines represent the corresponding regression lines with the origin intercept and slope of the regression equations and their corresponding standard errors;  $R^2$ , coefficient of determination. The inset in each graph shows the raw data for each depth layer.