Environmental controls on estuarine nitrifying communities along a salinity gradient

Maria Monteiro*, Joana Séneca, Luis Torgo, Daniel F. R. Cleary, Newton C. M. Gomes, Alyson E. Santoro, Catarina Magalhães

*Corresponding author: mariarviscomonteiro@gmail.com


Fig. S1 – Taxonomic composition of prokaryotic communities identified in 16S rRNA gene-tagged sequences, per sampling site. Each taxa was normalized for the number of sequences in each sample and presented as a percentage (A); Bootstrapped tree using weighted jackknifed UPGMA clustering based on rarefied community matrix; (B). Codes A1, A2 and A3 refers to location A (Afurada); B1, B2, B3 to location B (Areinho); C1, C2, C3 to location C (Avintes) and D1, D2, D3 to location D (Crestuma). The red color between the branches indicates a bootstrap support of 75% to 100%.
Fig. S2 – Spearman correlation between selected abiotic factors (Sal – salinity, NO3 – nitrate fluxes, NO2s – pore water nitrite concentration, IC – inorganic carbon present in the water column, NH4s – pore water ammonia concentration, NH4F – ammonia fluxes, NO2F – nitrite fluxes, NH4w – water column ammonia concentration, Ns – total Nitrogen present in the sediment, Cs – total Carbon present in the sediment, C:Nw/s – C:N ratios on water and sediment, fineS – percentage of fines in the sediment, OM – percentage of organic matter in the sediment, GravS – percentage of gravel in the sediment, Nnitrf – potential nitrification rates, NO3w – water column nitrates concentration, NO3s – pore water nitrates concentration, NO2w – water column nitrites concentration, Temp – temperature) and the relative abundance (%) of all identified phyla along the estuarine sampling sites. Blue, red and white squares represent negative, positive and absence of correlation between the two factors, respectively. The color grade represents the strength of the correlation. Left dendrogram depicts clustering of phyla by co-occurrence (average linkage clustering) using Euclidean distance.