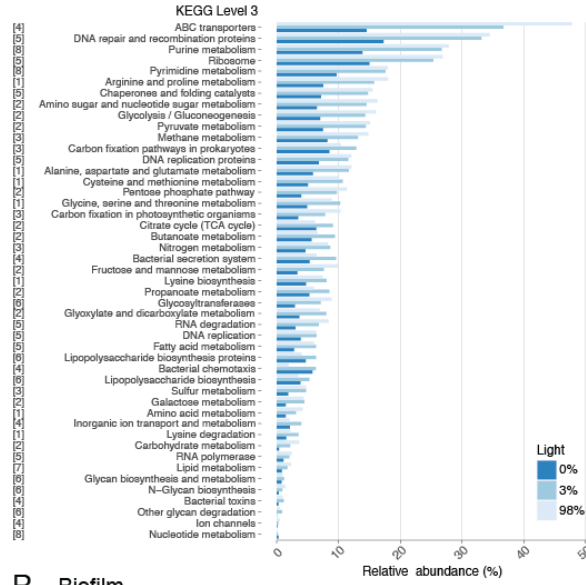
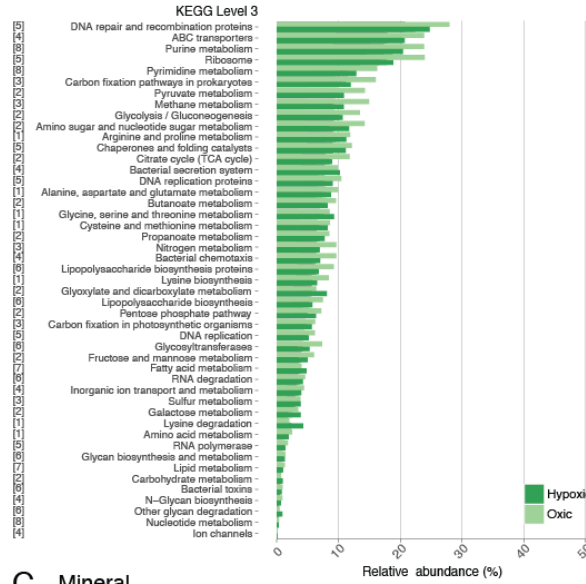


### A Water

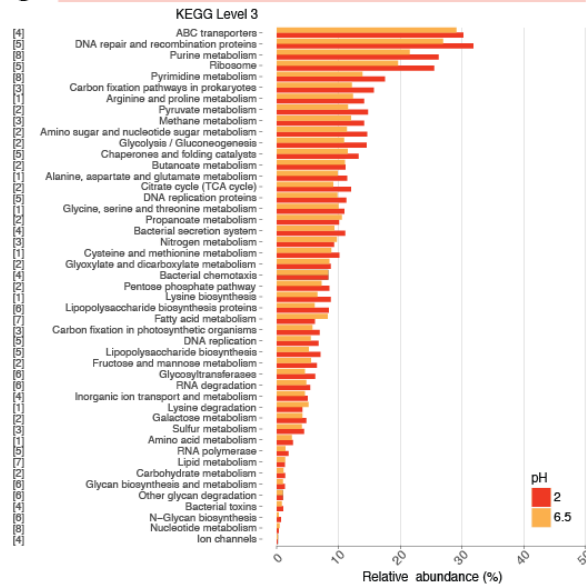


- KEGG Level 2
- [1] Amino acid metabolism
  - [2] Carbohydrate metabolism
  - [3] Energy metabolism
  - [4] Environmental information processing
  - [5] Genetic information processing
  - [6] Glycan biosynthesis and metabolism
  - [7] Lipid metabolism
  - [8] Nucleotide metabolism

### B Biofilm



### C Mineral



**Supplementary Figure 4.** Bar graphs showing the relative abundances of genomic signatures predicted by PICRUSt within KEGG Level 3 categories among samples per microhabitat considered (water [A], biofilm [B], mineral fraction [C]), and geochemical variables (light [0, 3, or 98%] for water samples in shades of blue, depth [hypoxic, oxic] for biofilm samples in green colors, and pH [2 and 6.5] for mineral fraction samples in red tones). KEGG Level 2 categories are displayed on the y axis, and the corresponding legend is presented on the right.