

# Supplementary Material

## Ideas and perspectives: Mineralizing Fluid Control on Minor Elements in Biogenic CaCO<sub>3</sub>: Insights from Otoliths

Athina Kekelou\*<sup>1</sup>, Gerald Langer\*<sup>1</sup>, Patrizia Ziveri<sup>1,2,3</sup>

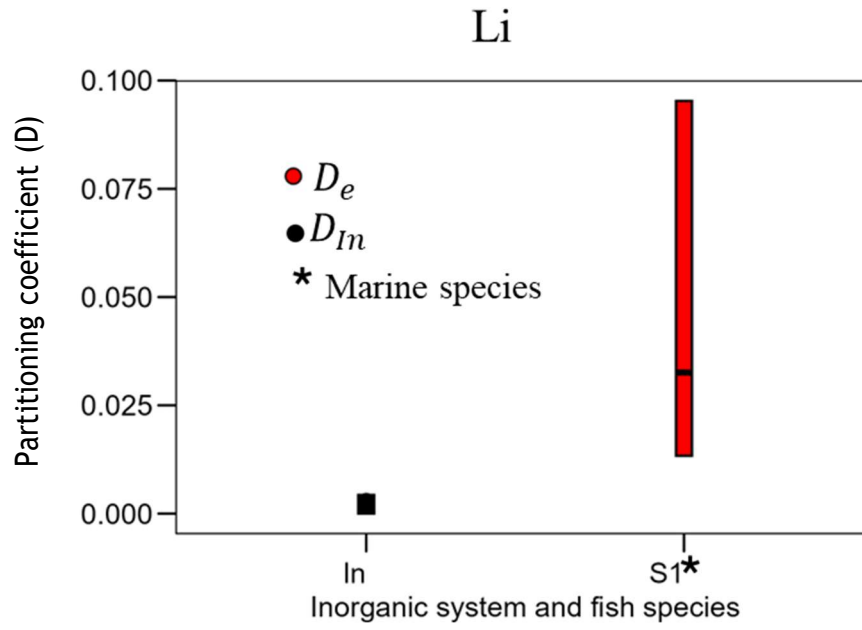
<sup>1</sup> Institute of Environmental Science and Technology (ICTA-UAB), Universitat Autònoma de Barcelona,  
08193, Bellaterra, Spain

<sup>2</sup> Catalan Institution for Research and Advanced Studies, ICREA, 08010, Barcelona, Spain

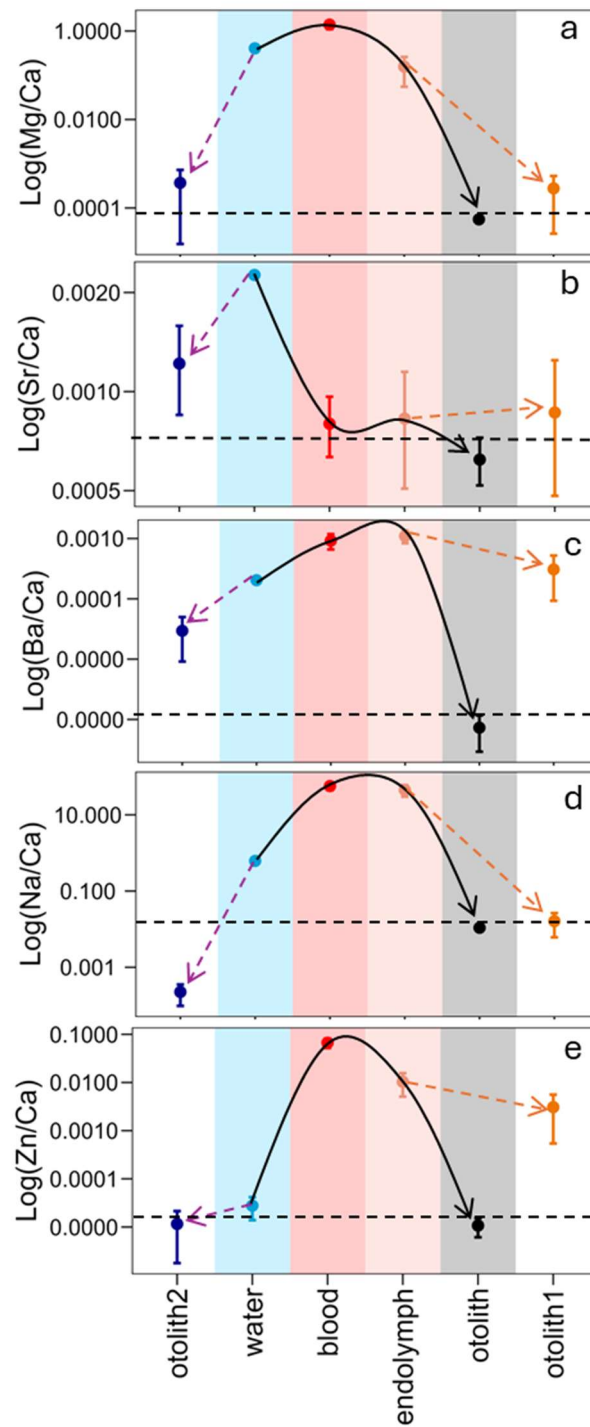
<sup>3</sup> Departament de Biologia Animal, de Biologia Vegetal i d'Ecologia, Universitat Autònoma de Barcelona,  
Bellaterra, Spain

\*These two authors contributed equally to this work.

Corresponding authors: [Athina.Kekelou@uab.cat](mailto:Athina.Kekelou@uab.cat) & [Gerald.Langer@uab.cat](mailto:Gerald.Langer@uab.cat)



**Figure Supp.1** The partition coefficient ( $D$ ) for Li, the range of the inorganic system (In) and of the marine fish (\*) the *Acanthopagrus butcheri* (S1). The different colors of  $D$  values, red is the  $D_e$  (endolymph as parent solution) for the fish and black is the  $D_{In}$  of the inorganic aragonite.



**Figure Supp.2**  $Me/Ca$  of lake trout *Salvelinus namaycush* (S3) in different reservoirs indicated by colored areas. The white areas (otolith 1 and otolith 2) do not represent measured values but are calculated according to  $otolith1 = Din * (Me/Ca)_{endo}$ , and  $otolith2 = Din * (Me/Ca)_{water}$ . For  $Din$  we used either the minimum or the maximum value depending on which one would minimize the offset between  $(Me/Ca)_{oto}$  Measured and  $(Me/Ca)_{oto}$  Calculated. The error bar represents the range of the values that the system can reach. a) is the pathway of Mg, b) the pathway of Sr, c) the pathway of Ba, d) the pathway of Na and e) the pathway of Zn.