

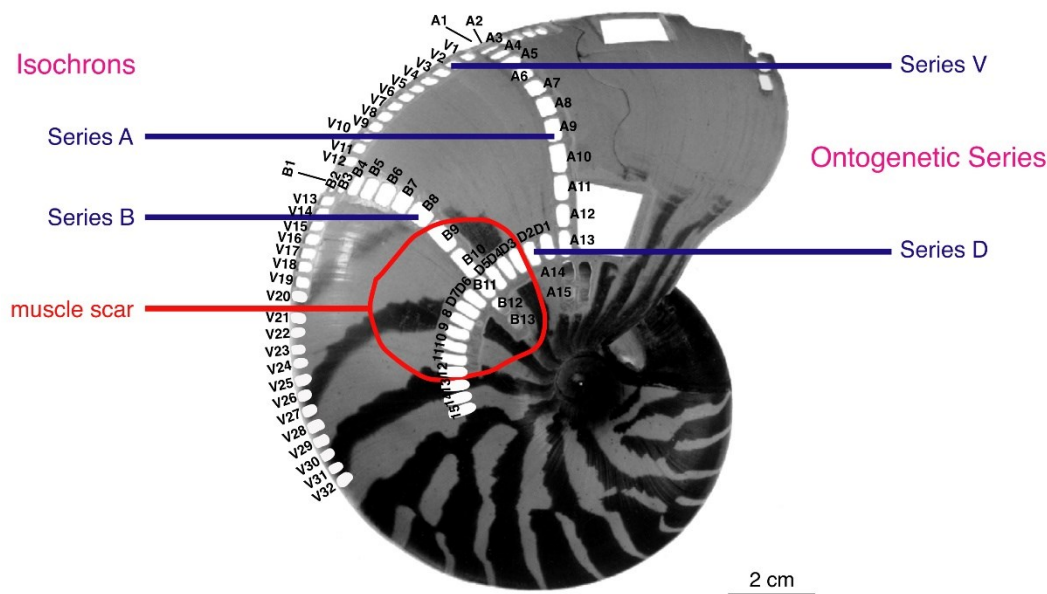
Seminario

Do we need to reevaluate the oxygen isotope fractionation equations between biogenic aragonite and water?

Tuesday, 20 May 2025 – 16:30, Aula Arduino

Relatore:

Prof. Dr. Christophe Lécuyer - University Claude Bernard Lyon, CNRS, Institut
Universitaire de France



Reconstructing past ocean temperatures has major scientific implications, including insights into Earth's radiation balance, the CO₂ cycle, and climate-driven limits on biodiversity and biomass. Surface temperature patterns also influence ocean circulation, oxygen levels, and sea level changes. This presentation reviews current understanding of oxygen isotope fractionation between biogenic aragonite and water, which is critical for paleotemperature reconstructions. While many marine invertebrates, especially molluscs, build aragonitic shells, existing fractionation equations vary due to differing empirical, theoretical, or experimental approaches. We will examine these methods and present new data that help resolve inconsistencies and offer fresh perspectives for refining marine paleoclimate models.

Proponente: **Manuel Rigo**