

Ph.D. Fellowship, “Effects of ocean acidification on calcification and incorporation of elements and isotopes in Mediterranean Pteropods and Foraminifers”

A **PhD** fellowship to work on “Effects of ocean acidification on calcification and incorporation of elements and isotopes in Mediterranean Pteropods and Foraminifers” is available within the EU FP7 project “Mediterranean Sea Acidification in a changing climate” (“MedSea”).

Ocean acidification affects not only the calcification potential of marine organisms but also the incorporation of (trace) element and isotope fractionation. Insights in the effects of ocean acidification on calcification are necessary to project possible consequences for aragonitic organisms such as pteropods and calcitic ones such as Foraminifers. They are key players in the food-webs and biogeochemical cycles. Furthermore, the elemental and isotopic composition of fossil shells are a valuable tool to reconstruct paleoclimates and investigating the impact of ocean acidification on shell geochemistry is invaluable for a better understanding of past ocean acidification events.

Responsibilities: The applicant will carry out laboratory-controlled experiments, manipulating the carbonate system as well as other environmental parameters, to investigate how ongoing ocean acidification is affecting the calcifying potential of Pteropods and Foraminifers and how ocean acidification interacts with other stressors. The following processes will be measured on live specimens: calcification, respiration, nutrition, excretion and life cycles. The effects on the carbonate polymorph and the ultra-structure will be investigated with Raman spectroscopy, SEM and AFM. Impacts on the elemental and isotope composition will be analysed using a laser ablation multi-collector ICP-MS.

Requirements: We seek a candidate with a background in carbonate chemistry, culture experiments and/or analytical experience.

Host laboratories: The experimental work will be performed at the Laboratoire d'Océanographie de Villefranche (Villefranche-sur-mer, France) while the analytical work will be performed at the Alfred Wegener Institute (AWI) for Polar and Marine Research (Bremerhaven, Germany). The student will spend 18 months in each institutes and will be registered in the doctoral schools of Université Pierre et Marie Curie (Paris 6) and at the Jacobs University (Bremen).

Duration of fellowship and stipend: This is a three-year position starting around 1st March 2010. The salary will be according to the rule of the two institutions.

Further information:

Jelle Bijma (+49 471 4831-1831), jelle.bijma@awi.de

Jean-Pierre Gattuso (+33 493-763859), gattuso@obs-vlfr.fr

How to apply

The candidates should send, to both supervisors, a curriculum vitae, a short (less than one page) statement on why she/he finds this offer attractive, and the name and email address of three referees. The deadline for application is 4 February 2011.