

## **PhD position - bioturbation impact of a chemosymbiotic bivalve on mangrove geochemistry**

A PhD position is available at IFREMER (Plouzané - France) to study the impact of a chemosymbiotic bivalve (living on free sulfides) on the reduced sediments of Guadeloupe mangroves. In this PhD study, we will focus on Fe and S cycles, as H<sub>2</sub>S is a key element in these bivalves functioning, and iron is responsible for a large part of sulfur trapping and burial in sediments (in the form of FeS and FeS<sub>2</sub>). We chose to work on a coastal specimen of bivalve from the lucinid family living in reduced environments as mangroves. The main objective is declined in 3 specific objectives: 1) The characterization of the iron and sulfur geochemical cycles at a centimetric scale around a lucinid burrow, 2) the experimental evaluation of the effect of the density of lucinids bivalves on the iron and sulfur cycle in reconstituted sediments at laboratory (decimetric scale) and 3) the experimental evaluation of the effect of the density of lucinids bivalves on the iron and sulfur cycle within natural mangrove sediments in association with the spatial structure of the Lucinids population and the other benthic organisms living there (metric scale). The PhD student will use experiments in the lab and in the field.

Applicants must hold a master degree or equivalent in geosciences, geochemistry, oceanography, environmental sciences or related disciplines. Some knowledge/strong interest in biology/ecology would be appreciated. The applicant should be highly motivated and willing to participate in field and lab work as well as in conferences. Field trips to Guadeloupe mangroves will be planned (2 months/year).

The position involves collaboration with The Antilles University (Pr Olivier Gros), Stony Brook University (USA – Pr Robert C Aller and Pr Qingzhi Zhu) and IUEM-LEMAR (University of Brittany – Dr Emma Michaud). It is for 36 months, with a start date around the 1<sup>st</sup> of November 2019.

Please direct questions to Dr. L. Pastor ([lucie.pastor@ifremer.fr](mailto:lucie.pastor@ifremer.fr)). To be considered, please provide a CV, a statement of interest, your master diploma and the names and contact information of at least two referees. Follow the procedure detailed on the website to apply.