

## Postdoctoral research position in polar paleoclimate dynamics

**Context:** The Université Claude Bernard Lyon 1 (UCBL) is a multidisciplinary university with almost 46,000 students and 4,900 employees. As a responsible employer, UCBL is committed to promoting quality of life at work, professional inclusion and individual and collective innovation.

The Geology Laboratory (LGL) of the UCBL (4Pal team; <https://lgltpc.fr>) invites applications for a 24-months postdoctoral position (ETOILES) to reconstruct seawater temperatures near the Early Jurassic North Pole using exceptionally preserved bivalves from Siberia. Depending on previous professional experience, the net annual salary range set by UCBL is ~22 300-33 800 euros.

**Objectives:** Our project aims at reconstructing polar climate dynamics during the Early Jurassic, with a particular emphasis on the Toarcian hyperthermal event. The main objective of the project is to reconstruct changes in polar seawater temperatures across this major episode of environmental change, focusing principally on seasonal variability, which remain largely unconstrained for polar areas under greenhouse climates.

For this purpose, the successful candidate will assist in measuring  $\delta^{18}\text{O}$  and  $\delta^{13}\text{C}$  values of Pliensbachian-Toarcian bivalve shells, including material recently collected along the Vilyui and Tyung rivers (Siberia). Growth patterns in bivalve shells will be identified through optical and chemical methods (LA-ICP-MS) to temporally contextualize the chemical properties (bivalve sclerochronology). The obtained temperatures will be completed by  $\Delta 47$  data (Mathieu Daeron, LSCE) and compared with numerical climate simulations (Yannick Donnadieu, CEREGE).

The successful candidate will work with staff in the GENESIS Stable Light Isotope Laboratory (<https://lgltpc.fr/tous-plateforme/genesis/>), in collaboration with Christophe Lécuyer, Romain Amiot, Arnaud Vinçon-Laugier (LGL) and Marc de Rafélis (GET Toulouse). You will carry out various research activities, perform stable isotope measurements, and prepare peer-reviewed publications, reports, presentations, and popular articles. Close collaboration with other members of the research team is essential.

### Requirements:

- PhD degree in Earth Sciences, Biology, Chemistry or related field
- Outstanding motivation and enthusiasm
- Basic knowledge of paleoclimatology and paleoecology, specifically geochemistry. Previous experience with sclerochronology would be advantageous
- Broad scientific background in isotope geochemistry

**Application:** Interested individuals are invited to submit an application package including:

- A motivation letter explaining why they apply and how they meet the hiring criteria outlined above
- CV including list of publications / scholarly outputs
- Copies of certificates (high school, BSc and MSc/diploma, PhD), degree transcripts (plus English or French translation)
- Names and contact details of at least two academic referees who have taught, supervised or worked alongside you

as a single pdf to [guillaume.suan@univ-lyon1.fr](mailto:guillaume.suan@univ-lyon1.fr).

**Application Deadline: 15<sup>th</sup> of April 2024.** Note, application review will begin immediately. The position will remain open, and applications will be reviewed until the position is filled.