

PhD contract offer, Instituto Pirenaico de Ecología, CSIC (Spain)



TEMPURA: TEMPeratUre Reconstruction At past rapid climate transitions

TEMPURA proposal is aimed to quantify the temperature change in past rapid climate events in Iberia, focusing on those transitions that represent a large temperature change (above 2°C) in a short time period (decades-centuries) during

glacial terminations and during the Holocene. We are going to apply for the first time in Iberia Peninsula a combination of novel geochemical quantitative proxies in speleothems and lake sediments that, after a robust calibration, will produce temperature estimations for past abrupt changes. Those indicators are (i) the isotopic composition of fluid inclusions, (ii) the clumped isotopes and (iii) the composition in branched- glycerol dialkyl glycerol tetraethers (branched-GDGTs).

We are looking for a doctoral candidate who will carry out the following tasks:

- Field work: monitoring survey in high mountain lakes and caves; sediment coring and speleothem sampling
- Laboratory tasks: carrying out multiproxy geochemical analyses in collaboration with national and international specialists in the three proposed techniques (fluid inclusions, clumped isotopes and GDGTs). Sample preparation for U-Th and 14C dating
- Publication of results in international journals, dissemination at scientific conferences and outreach events.

The essential requirements expected of candidates are:

- Degree in geology, chemistry or environmental sciences
- Additional training in geochemistry would be important
- Master's degree related to geochemistry, environmental sciences or global change.
- Independence and ability to self-organise, as well as a collaborative spirit and teamwork.

Requirements not essential, but desirable, of the candidates are:

- Proficiency in English, especially written.
- Ability to do field work as well as laboratory work.
- Curiosity, motivation and enthusiasm.
- Ability to communicate with different audiences and social skills.



The Quaternary Palaeoenvironments group of IPE-CSIC offers:

- Training to develop a future research career, with the possibility of exploring options outside academia.
- 4-year AEI contract for the completion of a doctoral thesis (according to salary tables for the year 2022, 12 payments which, depending on personal situation, is ca. 1300€/month with annual salary increase according to Spanish IRPF and additional from the third year onwards).
- Additional training opportunities within the framework of the CSIC, but also financed by the group's own projects.
- Working in an international environment with several programmed research stays (e.g., Germany and Austria).
- Participation in national and international conferences.
- Possibility of personal and professional development in "soft skills" (dissemination, oral expression techniques, communication, etc.).
- Excellent working environment that promotes each person's skills and individual development.

Previous and current students in the group can be contacted.

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