Job posting

Type of position
☒ scientific
☐ administrative

Target group
☒ graduates
☐ post docs
☐ other

Title
PhD position in paleogenetics

Institution
Institute of Geosystems and Bioindication, TU Braunschweig in close collaboration with the Escuela Española de Historia y Arqueología en Roma (EEHAR-CSIC) and the University of Pisa

Position
We are seeking a highly motivated doctoral researcher for the Karl-Heinz Frenzen-Stiftung funded Forschergeist! Project “Paleoecology and past human impact on Lake Bracciano, Italy”.

The project aims to analyse sedimentary ancient DNA of a set of lake sediment cores from the submerged Early Neolithic settlement site “La Marmotta” in Lake Bracciano, Italy, to reconstruct past vegetation changes in the lake catchment, the arrival of domesticated plants and animals and the aquatic biodiversity development from the onset of the Neolithic to modern times. This will add a new dimension to the ongoing study of this fascinating and important Neolithic site in the Mediterranean basin and the analysis of the lakes’ sediment record will further allow a detailed reconstruction of aquatic and terrestrial biodiversity changes and human-environment interactions in the lake and its catchment area. The information of this study will not only provide insights into the lake environment during the occupation of “La Marmotta”, but throughout history from the Neolithic to the modern period. This will add to the available historical knowledge of human presence in this region and the understanding of climatic variations. The climatic effects on the aquatic biodiversity and water quality of the lake can then be used to support modern day lake management as an important freshwater resource for human supply in this region.

Responsibilities
As a core task, the researcher will use molecular tools based on ancient DNA to reconstruct past vegetation changes in the lake catchment, the arrival of domesticated plants and animals and the aquatic biodiversity development from the onset of the Neolithic to modern times. Willingness to perform sampling trips to Italy is mandatory.
**Requirements**

We will preferably hire a researcher with experience in the analysis of environmental DNA/ancient DNA analysis/metabarcoding of eukaryotic or prokaryotic organisms. Expertise with analysis of next-generation sequencing techniques (e.g. Illumina amplicon analysis) and associated bioinformatics and statistical tools will be of high advantage. Candidates who lack expertise in these methods, but have hands-on experience with other sophisticated molecular laboratory techniques are also encouraged to apply. Fluent verbal and written English communication skills are required. This position requires a Master’s degree in an appropriate subject such as biology, environmental science, genetics or bioarchaeology. Experience in aquatic and palaeoecology, as well as bioinformatics are advantages. Personal fit to the team and teamwork skills are important. Average physical condition is sufficient for the field work.

**Application procedure (deadline etc.)**

Please submit your application (in English) as one pdf file to k.dulias@tu-braunschweig.de before 30.09.2022. The application should include the following information: CV, letter of motivation, transcript of records, certificates, and two reference letters.

We offer involvement in an interesting interdisciplinary and international research project, a good academic environment with dedicated colleagues, a large degree of independence in work, and flexible working hours. TU Braunschweig is an equal opportunity employer committed to excellence through diversity. We explicitly encourage women to apply and preference will be given to disabled applicants with equivalent qualifications.

For any further information concerning the position, requirements and application process please contact: Dr. Katharina Dulias (k.dulias@tu-braunschweig.de).

**Contact**

Dr. Katharina Dulias (k.dulias@tu-braunschweig.de)