

## **Eurac Research is looking for a Postdoctoral researcher in ancient DNA metagenomics**

Please see the website for the relevant contacts, eligibility criteria, and application procedures:

[https://eurac.onboard.org/mummies\\_postdoc\\_25112024\\_jobportal](https://eurac.onboard.org/mummies_postdoc_25112024_jobportal)

We are looking for a Postdoctoral researcher with strong computational and statistical skills and with consolidated experience in metagenomics analysis. The candidate should have expertise in the analysis of microbial and optionally dietary or human genomic data from ancient and modern samples.

The project will apply in-depth genomic analyses of paleofeces from the Hallstatt salt mine to reconstruct the individual dietary profile and gut microbiome of the prehistoric miners. It has been funded by the Autonomous Province of Bolzano/ Bozen South Tyrol and the Austrian Science Fund in the framework of the Programme Joint Projects "Progetti di cooperazione internazionale" - Alto Adige-Austria (FWF).

**We offer a three-year full-time Postdoctoral position at the Eurac Research - Institute for Mummy Studies in Bolzano, Italy.**

**The position is available from April 2025.**

Our Institute is internationally renowned for its research on the Iceman and other mummified and skeletal human remains of different periods from all over the world. The position will be in the framework of a three-year interdisciplinary Joint Research project that aims to understand the dietary habits of our ancestors. The research focuses on human paleofeces from the prehistoric Hallstatt salt mines. The high salt concentration in the mine workings and the constant temperature of 8°C have created excellent preservation conditions for organic remains incl. millennia-old excrements. Through microscopic and molecular analyses of these paleofeces, our team will be able not only to reconstruct the diet of the miners that lived about 3000 years ago but also to provide remarkably precise insights into the bacterial colonization of their gut. The goal of this project is to gain a better understanding of the role that complex processed foods, in particular fermentation, played in the history of human nutrition and to observe changes in the gut microbiome that are linked to diet.

### **Tasks**

- Plan and perform experiments, analyze data and synthesize results within an interdisciplinary project bringing together archaeology, archaeobotany, parasitology and zooarchaeology.
- Perform the bioinformatic analyses of the metagenomic data produced from the paleofeces.
- Phylogenetic and statistical analyses of the microbial, dietary and human genomic data (for details please refer to <https://shorturl.at/pv1Nx> ).
- Collaborate with the research team to develop new methodologies and innovative approaches.
- Participate in scientific conferences and publication of results in peer-reviewed journals.

### **Requirements:**

- PhD degree in microbiology, computational biology, bioinformatics or related fields.
- Strong computational and statistical skills with expertise in metagenomic analyses.
- Proficiency in programming languages such as R and Python.
- Experience with workflow management systems (e.g., Snakemake, Nextflow, or similar) is highly advantageous.
- Proficiency in spoken and written English.
- Excellent problem-solving skills and the ability to work both independently and collaboratively.

**We offer:**

We offer a three-year full-time Postdoctoral position, starting in April 2025. We welcome candidates who are eager to explore novel research questions and develop creative solutions within the scope of our projects. The candidate will have the opportunity to work in a stimulating multidisciplinary team composed of researchers from different fields and countries and, moreover, to collaborate with scientists from other national (CIBIO University of Trento) and international (Austrian Archaeological Institute at ÖAW, Natural History Museum Vienna, Institute for Systems Biology Seattle, Geosphere Austria, MedUni Wien) institutions.

**How to apply:**

Interested candidates should submit their application (CV, cover letter and further relevant documents) by **06.01.2025**

The project "Mining and Dining - Prehistoric Salt Miners' Foodways" (CUP: D53C23004210003) has been funded by the Autonomous Province of Bolzano/ Bozen South Tyrol and the Austrian Science Fund [10.55776/PIN4721024] in the framework of the Programme Joint Projects "Progetti di cooperazione internazionale" - Alto Adige-Austria (FWF).

Please also see the job applications: <https://www.eurac.edu/en/job-opportunities>