



## Postdoctoral Research Fellowships in Ancient Proteins

The Department of Archaeology at the Max Planck Institute for the Science of Human History (MPI-SHH) is a leading global centre for archaeology that combines expertise in field and laboratory methods. Our research is focused on developing and implementing cutting-edge new methods for exploring our species' past. To do this, we work at the interface of multiple disciplines, including archaeology, ecology, biology, and evolutionary studies. We are interested in how a deep time perspective can shed new light on contemporary issues ranging from climate change and anthropogenic environmental impacts to migration, inequality, and food security.

### Our community and working environment

Our student and post-doctoral community is international and diverse. We are a lively, friendly, and active department that hosts a broad variety of projects, workshops, conferences, meetings, speakers and other events. We prioritise training students and postdoctoral researchers not only in research methods and skills, but in all aspects of academic life, providing professional development training to ensure our students and postdoctoral researchers reach their best potential, and are fully prepared for the job market, for applying for funding, and for dealing with the challenges of academic life. The success of this approach is reflected in our placement rates. Although we are a young department, we have a strong record of placing postdoctoral researchers in tenure-track and other academic positions.

We are committed to encouraging diversity and actively challenging biases based on gender, nationality, ethnicity, sexual orientation, religion and other components of identity. We strive to undertake ethical research, and to foreground training and capacity building as a core part of our international research. To this end, we have established the International Application of Archaeological Science training programme, which is held annually in our Department, and welcomes scholars from around the world for intensive training in archaeological science methods.

Our working language is English.

### Our facilities

We have world-leading facilities for archaeological science. These include extensive facilities for bulk and compound-specific stable isotope studies, lipid and alkane analyses, Zooarchaeology by Mass Spectrometry (ZooMS), proteomics, SEM and



light microscopy, and microfossil studies, as well as laboratories for archaeobotany and zooarchaeology. We are in the process of expanding our laboratory facilities to include amino acid and metabolite capabilities, and AMS radiocarbon dating. We also have extensive equipment for digital field archaeology, as well as laboratory facilities for 3-D scanning and analysis, photography and geospatial modelling. Our work is supported by expertise in database management, statistical analysis and bioinformatics, as well as central facilities for media outreach and third party funding applications. Our institute is home to an International Max Planck Research School that supports student activities and teaching.

We have active projects around the world, particularly in Africa and Asia.

## Our offer

We are currently offering **up to three 2-year funded Postdoctoral Research Fellowships in Ancient Proteins**. Suitable candidates will develop a programme of research in collaboration with their supervisors, will take leadership of that programme, and will see the research through to publication. Postdoctoral Research Fellowships in the Department of Archaeology are extendable in exceptional circumstances, such as when postdoctoral researchers demonstrate significant success in terms of their research programme, publication output and commitment to the building and success of the department.

We offer a flexible start date, but ideally aim to make appointments by spring 2020. The successful applicant will be provided with intellectual, technical and resource support for the development of world-leading research, and will have the opportunity to work with a multidisciplinary team of PhD students, postdoctoral researchers and group leaders.

## Our expectation

The Max Planck Institute for the Science of Human History provides a research-focused environment for scholars to develop innovative, world-leading projects. We seek Postdoctoral Research Fellows with a passion for cross-disciplinary, team-oriented research, and an ability to work efficiently and complete projects in a timely manner. Postdoctoral researchers are expected to publish findings in top-tier, international research journals, and to support media interest in their research. Candidates should demonstrate an ability to finish projects to the publication stage, and to formulate research articles that fill key gaps and answer central questions in their fields of study.

The successful candidate will develop projects collaboratively with supervisors in the Department of Archaeology, and work in an interdisciplinary fashion. Research projects should address the Department's core interests, including the



anthropogenic shaping of environments and species; the impacts of past climate change on human societies; the co-evolution of humans and domesticated species; human dispersals and migration; and the effects of increasing complexity, urbanisation and globalisation on human populations and societies. Preference will be given to candidates proposing projects focused on Asia and Africa.

We expect our postdoctoral researchers to play an active role in department life, and to contribute to supporting the department in a variety of ways. Our postdoctoral researchers help teach, train and supervise students, run committees, organise research, professional development and social events, and create a supportive environment for all staff members and visitors.

## **Position-specific details: Postdoctoral Research Fellowship in Ancient Proteins**

Postdoctoral Research Fellows are sought to develop methods and applications in ancient protein research, including 1) Zooarchaeology by Mass Spectrometry; 2) palaeoproteomics; and 3) bioinformatics. Successful candidates will undertake cutting edge research on ancient proteins and assist the department in building on its growing expertise in the field of ancient proteins. Successful applicants will help expand the range of archaeological and evolutionary questions that can be addressed through the study of proteins, and develop methods and computational approaches to improve approaches to ancient proteins.

The extraction, identification and analysis of proteins from human and animal-derived remains (bones, shell, teeth, etc.), as well as other archaeological sources, has emerged as an exciting new area of interdisciplinary research. The applicant will be offered the opportunity to drive this field forward in archaeology, focusing on such areas as 1) the use of palaeoproteomics for the study of phylogenetic relationships in extinct humans and mammals; 2) the use of palaeoproteomics to study human evolution; 3) the use of palaeoproteomics to study ancient diet, health and disease; 4) the use and development of ZooMS (collagen fingerprinting) to identify and screen osteoarchaeological material; and 5) the development of palaeoproteomics and bioinformatics methods.

The successful applicant will be encouraged to work with other researchers in the Department as well as internationally, including those engaged in biomolecular, palaeoenvironmental, evolutionary and field archaeological research. Applicants from modern proteomics and biochemistry backgrounds are encouraged alongside those from the archaeological and evolutionary sciences. The successful applicant will have a proven track record of peer-reviewed publication in their relevant discipline.



## Your qualifications

### *Essential:*

- Have or be about to obtain a PhD degree or qualification equivalent in proteomics, genetics, biochemistry, evolutionary biology or archaeological science or a closely related field.
- A strong record of peer-reviewed publication.
- Experience with various laboratory techniques in the biological sciences or archaeological sciences.
- An interest in developing and advancing the study of ancient proteins.
- Effective time management skills and ability to efficiently coordinate research analyses through to publication.
- Candidates are expected to be enthusiastic about learning and exploring interdisciplinary research topics. They must also be willing to work as part of a research team and help build up and develop the Department of Archaeology's research programme in ancient proteins.
- Absolute reliability and a strong sense of responsibility.
- Ability to multi-task, find creative solutions to problems when necessary, and meet tight deadlines.

### *Advantageous:*

- An interest in developing new methodological approaches in ancient proteomics.
- Training and experience in proteomic laboratory research, maintenance, and management.
- Training and experience in the application of the latest statistical and bioinformatics approaches for the analysis of proteomic data.

## Application

The Max Planck Society is committed to employing more individuals with disabilities and especially encourages them to apply. The Max Planck Society also seeks to increase the number of women in the sciences and therefore explicitly encourages women to apply.

To apply, please submit, by 6 January, 2020 a cover letter expressing your experience and interest in the topic, a research proposal (3 pages maximum, not including references and figures), your CV, and your undergraduate, Master's and PhD transcripts. Three referees should also submit reports by the deadline and it is the candidate's responsibility to request these. They should be submitted through the application portal.

Submissions will only be accepted if they are sent through the online application portal and are received in full by **6 January, 2020**.

# Max-Planck-Institut für Menschheitsgeschichte

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[https://lotus2.gwdg.de/mpg/mjws/perso/shh\\_p025.nsf/application](https://lotus2.gwdg.de/mpg/mjws/perso/shh_p025.nsf/application)

Please note that while the research proposal offers the evaluation committee an opportunity to assess the candidate's ability to design an interdisciplinary field research project, and may feed into the final research programme, the research project undertaken by the successful applicant will be designed and decided in concert with the Postdoctoral Researcher's supervisors in the Department of Archaeology.

Shortlisted candidates will be informed by 10 January, 2020 and should be available to attend our recruitment workshop and interviews in Jena, Germany 3-4 March, 2020.

If you have any questions about the application process, please contact [dasecretary@shh.mpg.de](mailto:dasecretary@shh.mpg.de). For questions about the research and position, please contact Professor Nicole Boivin ([boivin@shh.mpg.de](mailto:boivin@shh.mpg.de)) and/or Dr. Katerina Douka ([douka@shh.mpg.de](mailto:douka@shh.mpg.de)).