PAASTA NEWSLETTER

Palaeoproteomics **A**nd **A**rchaeology, **S**ociety for **T**echniques and **A**dvances

3/2025

Dear PAASTA community,

Welcome to the third newsletter of 2025! This quarter, we will have our first in-person meeting on August 26th in Turin, Italy. Also, we will elect a new steering committee. For that we need candidates and helpers, more details below.

If there is anything you would like to let others know via this newsletter - no matter if it's a big or minor thing - you are very welcome to let us know by sending a message to paasta.community@gmail.com.

Upcoming Events

July 2nd	PAASTA talk: Miranda Evans - The Proteomics of Pottery: What can dirty dishes tell us about ancient diet and cuisine?
August 26th	PAASTA meeting in Turin, Italy (online option will be available). Registration open now
August 26th-29th	ISBA11 in Turin, Italy. Registration open now
October 14th-17th	ICAZ working group meeting on Archaeozoology, Genetics, Proteomics and Morphometrics (AGPM) in Copenhagen

Is there some event you are missing in this list? Let the community know in the #events Element channel (info how to join Element in footer). We also have a google calendar. If you have any events that you would like for us to add to this calendar, please send them to paasta.community@gmail.com.

The second quarter of 2025

Your participation is needed: New steering committee

1. We will be looking for volunteers for a new steering committee, with **self-nominations** opening at the pre-ISBA PAASTA meeting on August 26th.

2. We are also looking for **someone to be in charge of putting together the new steering committee** (i.e. organising self-nominations and voting if necessary) based on the self-nominations. It should be someone who is not currently involved in the steering committee and also does not want to volunteer for the next one.

Platform change from *Slack* to *Element*

In April, we finally moved completely to our new messenger platform *Element*. This platform allows us to keep older messages and thus knowledge without any subscription. Currently the retired *Slack* space has 251 members, the *Element* space counts only 86 members. So in case you have not migrated yet, you can follow these instructions to first join the ISBA space, and thereafter join the PAASTA space here (paasta:archaeo.social). If you encounter any issues, please let us know and we can try to solve it together!

New Publications

Antonosyan, M., Mkrtchyan, S., Amano, N., Davtyan, R., Yeranyan, N., Badalyan, M., Poghosyan, S., Telunts, A., Stepanyan, K., Amiryan, M. and Zakyan, T., 2025. Species identification of osseous museum artefacts through peptide mass fingerprinting illustrated by a study on objects from Neolithic to Iron Age Armenia. *npj Heritage Science*, 13(1), pp.1-12. https://doi.org/10.1038/s40494-025-01763-2

Antonosyan, M., Maurer, G., Mkrtchyan, S., Boxleitner, K., Saribekyan, M., Hovhannisyan, A., Furquim, L., Stokes, F., Davtyan, R., Bobokhyan, A. and Azatyan, K., 2025. A biomolecular perspective on mobile pastoralism and its role in wider socioeconomic connections in the Chalcolithic South Caucasus. *iScience*, 28(6). https://doi.org/10.1016/j.isci.2025.112544

Bray, F., Julien, M.A., Delegue, L., Flament, S., Touzet, H., Auguste, P., Oueslati, T., Cohen, J. and Desclaux, E., 2025. Simultaneous taxonomic and sex identification of Bos and Bison teeth using low-invasive high-resolution mass spectrometry. *Journal of Proteome Research*. (in press) https://hal.science/hal-05107804v1

Chandrasinghe, P.C., Cereser, B., Bertazzo, S., Csiki-Sava, Z. and Stebbing, J., 2025. Preserving Fossilized Soft Tissues: Advancing Proteomics and Unveiling the Evolutionary History of Cancer in Dinosaurs. *Biology*, 14(4), p.370. https://doi.org/10.3390/biology14040370

Dong, J., Zhu, Z., Li, X., Lan, D., Huang, J. and Zhou, P., 2025. Enhanced non-invasive extraction of proteinaceous binders from painted artifacts using composite gellan gum. npj Heritage Science, 13(1), pp.1-12. https://doi.org/10.1038/s40494-025-01819-3

Evans, M., 2025. Metaproteomic approaches to ancient foodways: A review. *Journal of Archaeological Science*, 178, p.106211. https://doi.org/10.1016/j.jas.2025.106211

Fu, Q., Bai, F., Rao, H., Chen, S., Ji, Y., Liu, A., Bennett, E.A., Liu, F. and Ji, Q., 2025. The proteome of the late Middle Pleistocene Harbin individual. Science, p.eadu9677. https://doi.org/10.1126/science.adu9677

Inaba, H., Chiba, K., Saneyoshi, M., Miyaji, T., Kawakami, A., Nagaoka, N., Takechi, Y., Takabatake, K., Brink, K.S., Tanaka, M. and Eda, M., 2025. New Application of Histological Staining for Visualization of Endogenous Proteins in Fossil Material. Journal of Proteome Research. https://pubs.acs.org/doi/10.1021/acs.jproteome.5c00078

Lévêque, É., Teasdale, M.D., Fiddyment, S., Bro-Jørgensen, M.H., Spindler, L., Macleod, R., Bougard, F., Tange Olsen, M. and Collins, M., 2025. Hiding in plain sight: the biomolecular identification of pinniped use in medieval manuscripts. *Royal Society Open Science*, 12(4), p.241090. https://doi.org/10.1098/rsos.241090

Madupe, P.P., Koenig, C., Patramanis, I., Rüther, P.L., Hlazo, N., Mackie, M., Tawane, M., Krueger, J., Taurozzi, A.J., Troché, G. and Kibii, J., 2025. Enamel proteins reveal biological sex and genetic variability in southern African Paranthropus. Science, 388(6750), pp.969-973. https://doi.org/10.1126/science.adt9539

Morton-Hayward, A., Flannery, S., Vendrell, I. and Fischer, R., 2025. Deep palaeoproteomic profiling of archaeological human brains. PloS one, 20(5), p.e0324246.

https://doi.org/10.1371/journal.pone.0324246

Qi, B., Dou, H., Liu, W., Bennett, A., Rao, H. and Yang, Y., 2025. Differentiating goose eggshells through proteomics: A case study from Xitou, North China. Journal of Proteomics, p.105467. https://doi.org/10.1016/j.jprot.2025.105467

Qiaomei Fu et al. , The proteome of the late Middle Pleistocene Harbin individual.Science 0, eadu9677 https://www.science.org/doi/10.1126/science.adu9677

Peters, C., Oertle, A., Gillespie, R., Boivin, N. and Douka, K., Collagen peptide markers for three extinct Australian megafauna species. Frontiers in Mammal Science, 4, p.1564287. https://doi.org/10.3389/fmamm.2025.1564287

Service, R.F., 2025. The AI revolution comes to protein sequencing. *Science*, 388(6743), p.142. https://doi.org/10.1126/science.zf8te2c

Tenchov, R. and Zhou, Q.A., 2025. Molecular Paleontology Meets Drug Discovery: The Case for De-Extinct Antimicrobials. ChemRxiv (PREPRINT) https://chemrxiv.org/engage/chemrxiv/article-details/684444471a8f9bdab5a3b463

Tsutaya, T., Sawafuji, R., Taurozzi, A.J., Fagernäs, Z., Patramanis, I., Troché, G., Mackie, M., Gakuhari, T., Oota, H., Tsai, C.H. and Olsen, J.V., 2025. A male Denisovan mandible from Pleistocene Taiwan. *Science*, 388(6743), pp.176-180. https://doi.org/10.1126/science.ads3888

Wilke, C., 2025. The Hunt for Proteins in Dinosaur Fossils. *ACS publications*. https://doi.org/10.1021/acscentsci.5c01027

Yilmaz, M., 2025. Translating Mass Spectra to Peptides With Deep Learning (Doctoral dissertation, University of Washington).
https://www.proquest.com/openview/f6eaf8a271a935d1eb410b166d41ca25/1?cbl=18750&diss=y&pq-origsite=gscholar

Is there some publication you are missing in this list? Let the community know in the #papers Element channel (info how to join Element in footer).

Job opportunities

3-6 year tenure-track position, at Centre national de la recherche scientifique (CNRS) in Paris in “Biomolecular archaeology of society-environment interactions” (closes **July 14th**)

https://emploi.cnrs.fr/Offres/CPJ/CPJ-2025-036/Default.aspx?lang=EN

Is there some job advertisement you are missing in this list? Let the community know in the #jobs Element channel (info how to join Element in footer).

Updates from community projects

There are several teams working on different aspects to help improve the study of ancient proteins. Do you work on interesting projects inside or even outside PAASTA and want to let others know or ask for help? Let us know via E-Mail!

Targeted databases for LC-MS/MS Team

We've been working on a short project on comparing shorter, context-specific databases to reduce computation time. We've also been trying to implement nextflow based pipelines for large-scale analysis. Another thing that came up during our meetings was the need to curate a metadata standard for palaeoproteomics; this would essentially be us defining ontologies that matter to everyone. And as always, we would love to have more people on-board :)

ZooMS marker database Team

Here you find the readme and the mailing list.

White paper Team

The PAASTA community led white paper, *"Open science, communication, and collaboration for the future of palaeoproteomics"* has been submitted and a preprint is available here. The paper has been recommended by PCI Archaeology: https://doi.org/10.5281/zenodo.15546095 and the latest version has been submitted to Peer Community Journal

Stay connected

- Sign up to our PAASTA mailing list, if you haven't yet!
- Our website
- Our spreadsheet of palaeoproteomics labs
- Join our Element space (alternative to Slack)
- E-Mail us: paasta.community@gmail.com
- Speaker sign-up form for PAASTA talk series
- YouTube
- Twitter ("X")
- BlueSky

This newsletter was composed by Johanna Krueger.

The PAASTA Community is an affiliate of The International Society for Biomolecular Archaeology (ISBA), a Charitable Incorporated Organisation registered in England. ISBA provides infrastructural and financial support of the student-led activities of PAASTA.