



AASTA NEWSLETTER

Palaeoproteomics And Archaeology, Society for Techniques and Advances

Dear PAASTA community,

You are reading the first newsletter of our community! It's been only a bit more than a year since we went from an informal meeting at ISBA10 in Tartu to this flourishing community. So obviously there is a lot going on and this is where this newsletter comes in. The PAASTA newsletter will appear quarterly and inform you about upcoming events, new publications and preprints, job opportunities, ongoing research, etc. The best thing is: The content is up to you! 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

January 26 th	Janeiro na Madeira Meeting 2025 - The Proteomics Winter Summer School, Madeira, Portugal, contact: muriel.priault@ibgc.cnrs.fr
February 5 th	PAASTA Talk: Pauline Raymond - Integrating ZooMS and Zooarchaeology: Building Community and Exploring Neanderthal Subsistence
March 5 th , 15:00 CET	PAASTA Talk: Ioannis Patramanis - PaleoProPhyler: a reproducible Pipeline for phylogenetic inference using ancient proteins
April 2 nd	PAASTA Talk: Alex Burnett - A User Guide to ClassiCOL: taxonomic classification of mixed or individual species by collagen peptides
August 26 th	PAASTA meeting in Turin, Italy (online option will be available)
August 26-29 th	ISBA11 in Turin, Italy, abstract deadline: January 20th

Is there some event you are missing in this list? Let the community know in the #events Slack channel (info how to join Slack 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.

New Publications

PaleoAnthropology Volume 2024, Issue 2, Special Issue: Towards a Deeper Integration of ZooMS and Zooarchaeology at Paleolithic Sites: Current Challenges and Future Directions.

<https://doi.org/10.48738/2024.iss2>

Adair, L.R., Lewis, M.E., Collins, M.J. and Cramer, R., 2025. LAP-MALDI MS analysis of amelogenin from teeth for biological sex estimation. *Journal of Pharmaceutical and Biomedical Analysis*, 255, p.116599. <https://doi.org/10.1016/j.jpba.2024.116599>

Chiang, Y. and Collins, M.J., 2024. Orthrus: an AI-powered, cloud-ready, and open-source hybrid approach for metaproteomics. *bioRxiv*, pp.2024-11. <https://doi.org/10.1101/2024.11.15.623814>

Chiang, Y., Nair, B.A.B., Ramsoe, M.E.E., Ravnsborg, T., Jensen, O.N. and Collins, M.J., 2024. Anubis: a multi-level authentication scale for ancient proteins using random forest classification. *bioRxiv*, pp.2024-11. <https://doi.org/10.1101/2024.11.15.623824>

Rodriguez Palomo, I., Nair, B., Chiang, Y., Dekker, J., Dartigues, B., Mackie, M., Evans, M., Macleod, R., Olsen, J.V. and Collins, M.J., 2024. Benchmarking the identification of a single degraded protein to explore optimal search strategies for ancient proteins. *Peer Community Journal*, 4. <https://doi.org/10.24072/pcjournal.491>

Kitagawa, K., Burger-Völlmecke, D., Brown, S., Olsen, J. and Riede, F., 2025. Paleolithic occupations in the Lahn Valley of Central Germany: New dating and ZooMS results from Wildscheuer, Wildweiberlei, and Wildhaus. *Journal of Archaeological Science: Reports*, 61, p.104951.

<https://doi.org/10.1016/j.jasrep.2024.104951>

Diaz-Granados, K.S., Bergemann, L.J., Ballard, M., Newsome, G.A., Kavich, G.M., Caldwell, J.D. and Cleland, T.P., 2025. Investigation of Natural Dyes and Taxonomic Identification of Fibers Used in Chancay Textiles by Vibrational Spectroscopy and Mass Spectrometry. *Journal of Proteome Research*. <https://doi.org/10.1021/acs.jproteome.4c00809>

Charlier, P. and Armengaud, J., 2024, December. Crano-facial trauma diagnosis using paleo-proteotyping of a blood sample from Robespierre (1794). In *Annales Pharmaceutiques Françaises*. Elsevier Masson. <https://doi.org/10.1016/j.pharma.2024.12.011>

Charlier, P., Armengaud, J., Poupon, J., Deo, S. and Astier, A., 2024. Can Napoleon's skin disease and treatment be identified from paleoproteomic analyses of his last bathtub (1821)?. *Journal of the European Academy of Dermatology and Venereology*. <https://doi.org/10.1111/jdv.20517>

Domínguez-Castillo, C., Garcia-Viñas, E., Bernaldez-Sánchez, E., Hortal, A.R., Villalon-Torres, D., Taylor, R., Garcia-Rivero, D. and Martínez Haya, B., Sheep in Early Neolithic South Iberia: Proteomic Answers to Archaeological Questions. Available at SSRN 5037595. <http://dx.doi.org/10.2139/ssrn.5037595>

Tafani, A., Greco, E., Tykot, R.H., Barbieri, P., Gaspari, M., Gabriele, C., Toma, A., Culea, M., Manea, B., Darie, A. and Opriș, V., 2025. Decoding KGK VI Population Movements: Strontium Isotope and Proteomic Insights from the Gumelnița Site (Romania).

<https://doi.org/10.21203/rs.3.rs-5693728/v1>

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

Job opportunities

Funded PhD Project (Students Worldwide) - University of Bristol: [Establishing past biodiversity baselines to guide UK wetland and freshwater nature recovery](#), Application deadline: February 10th

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

Highlights 2024

2024 was the first year of existence of our community. And although we were just getting started, a lot of events already took place. Time to proudly look back at some highlights!

In our **PAASTA talk series**, early career scientists get to present their work. This can be completed or ongoing projects. Over the course of the last year, eight scientists presented their work. In addition, one presentation was held as a cross-community event between SPAAM, HAAM, PAASTA and AaRC. The presentations are always held via Zoom, usually the first Wednesday of the month. The date, time, and Zoom link are announced on the mailing list and all other channels (see footer).

You want to be a speaker? - Sign up via this [form](#).

You missed a talk? - Many talks are recorded and can be found on the [PAASTA YouTube](#) channel.

Our first **Online Conference** with the theme “New Methods & Approaches” took place September 26th via Zoom. More than 20 presentations and over 200 participants demonstrated how much our community has already grown and how many different scientists work on Palaeoproteomics. Recordings of the presentations can be found on the [PAASTA YouTube](#) channel.

On October 16th, we held our first **Annual General Meeting**. The steering committee will continue their work for one more year, meaning that this year there will be elections. We now have a [code of conduct](#). The meeting minutes are still available on the #general channel in Slack.

2nd Integrating ZooMS and Zooarchaeology (IZAZ) workshop, 19-21 November 2024, Paris, France

Pauline Raymond, Raija Heikkilä, Giulia Gallo, Aurélie Artizzu, Annelise Binois-Roman

The Integrating ZooMS and Zooarchaeology (IZAZ) workshop series was initiated in 2023 (University of Kent, UK) and aimed to strengthen collaboration between Palaeolithic zooarchaeologists and ZooMS specialists, and overcome methodological issues. The second edition of IZAZ was held from November 19th to 21st at the Collège de France in Paris, France (<https://izaz2024.sciencesconf.org>). The event was organized jointly by the Collège de France and the Université Paris 1 Panthéon-Sorbonne. The organizing committee consisted of four early-career researchers – PhD students Pauline Raymond, Raija Heikkilä and Aurélie Artizzu and postdoc Giulia Gallo – and associate professor Annelise Binois. In 2024, the discussion topics were extended to both Pleistocene and Holocene contexts, providing an opportunity for cross-disciplinary collaboration. The workshop reflected the evolution of methodologies in the use of ZooMS over the past decade and a half, while also emphasizing novel applications and future directions for zooarchaeological studies. The event brought together forty-four researchers from twelve countries, including master students, PhD candidates, postdoctoral researchers, and senior scientists.

The workshop commenced with two keynote presentations, the first given by Virginie Sinet-Mathiot, providing a comprehensive overview of the major methodological advancements in ZooMS since its development, and the second delivered by Matthew Collins, focusing on how the integration of ZooMS can enhance traditional



zooarchaeological methods, particularly shape analysis. In the following days, twenty researchers highlighted their studies, covering a timeline from the Pleistocene to the Medieval period, and demonstrated the diverse applications of ZooMS in zooarchaeology.

Half a day was devoted to open and participative discussion sessions. Current practices in ZooMS applications were reviewed, along with methodological advances to be implemented. To finish the discussion sessions, different ways of improving collaboration between zooarchaeologists and ZooMS specialists were highlighted. Topics included how results are communicated between specialists, the taxonomic labels used, and clarification of the capabilities and limitations of ZooMS. A dedicated session further explored ZooMS and community engagement, with Camilla Speller showcasing the ADaPT facility's collaborations with First Nation and Indigenous communities in Canada. Jakob Hansen and Luise Ørsted Brandt also presented in this session the Next Generation Lab (NGL), a Danish citizen science initiative that identifies leather and bone artifacts while educating high school students in scientific techniques.

Overall, the effort made to better integrate the two fields is clearly demonstrated by the variety of contexts in which both are conjointly applied, and how this considerably improves our understanding of human behaviours and their multifaceted relationships with animals in the past.

The IZAZ workshop is a recurring event, with the next edition scheduled for 2026 in Burgos, Spain. Please look out for the forthcoming call for papers if you are interested in participating. For further information or questions you can contact Pauline Raymond: pauline.raymond@college-de-france.fr.

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

A message from the team:

"Hi, as you might have heard at the PAASTA symposium a while back we have curated a gene list for bone and another for enamel and are currently producing others for dietary mixtures and keratin-based materials. The way we are going to construct the databases is by downloading all proteins sharing the same gene names for a particular taxon ID. The easiest would be to do this for all mammals, but then it's not really a targeted database anymore. **So what we would like to ask you is to help with:**

- Selecting archaeological contexts interesting for testing
- Curating a taxon list of species present in that context and where possible, a taxonomic group encompassing as many of the species of interest as possible without including too many irrelevant species. At the moment we are expecting this workflow to be most effective for mammals, but don't let this stop you from suggesting birds, fish, reptiles, amphibians etc."

ZooMS marker database Team

If you want to know more about the project, there is a [readme](#).

In addition to the `#zooms_markers` channel in Slack, you can join the [mailing list](#).

White paper Team

This team is currently working on an opinion paper about how open science, communication and collaboration can move our field forward. They plan to submit it early this year.

Stay connected

- Sign up to our [PAASTA mailing list](#), if you haven't yet!
- Our [website](#)
- Join our [Slack space](#)
- E-Mail us: paasta.community@gmail.com
- [YouTube](#) 
- [Twitter \("X"\)](#) 
- [BlueSky](#) 

This newsletter was composed by Johanna Krueger.

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