

Marianne Dehasque, PhD

Human Evolution Program
Department of Organismal Biology
Evolutionary Biology Centre, Uppsala
Norbyvägen 18C
SE-752 36 Uppsala, Sweden
marianne.dehasque@ebc.uu.se

Employment history:

- | | |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2023 - 2025 | Postdoctoral Researcher (Carl Tryggers Stipendium)
Title: From wild to tamed and back – the genomic history of feralization
Supervisor: Torsten Günther
Uppsala University, Sweden |
| 2018- 2023 | PhD student
Stockholm University, Sweden |
| 2022- 2023 | Lab manager
Centre for Palaeogenetics, Sweden |
| 2017-2018 | Jr. Data Architect
Agilent technologies, Multiplicom branch, Belgium |

EDUCATION:

- | | |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2018 - 2023 | PhD in Systematic Zoology: Defended March 10, 2023
Title: <i>Palaeogenomic reconstruction of woolly mammoth evolutionary history and extinction dynamics</i>
Supervisor: Love Dalén
Stockholm University, Sweden |
| 2011-2016 | BSc & MSc in Biology
University of Antwerp, Belgium |

PEER-REVIEWED PUBLICATIONS (*indicates shared first authorship)

- Atağ, G., Kaptan, D., Yüncü, E., Başak Vural, K., Mereu, P., Pirastru, M., ... **Dehasque M.**,... Somel, M. (2024). Population Genomic History of the Endangered Anatolian and Cyprian Mouflons in Relation to Worldwide Wild, Feral, and Domestic Sheep Lineages. *Genome Biology and Evolution*, 16(5), evae090.
- **Dehasque, M.**, Morales, H.E., Díez-del-Molino, D., Pečnerová, P., Chacón-Duque, J.C., Kanellidou, F., Muller, H., Plotnikov, V., Protopopov, Tikhonov, A., A., Nikolskiy, P., Danilov, G.K., Gianni, M., van der Sluis, L., Higham, T., Heintzman, P.D., Oskolkov, N., Gilbert, M.T.P., Götherström, A., van der Valk, T., Vartanyan, S , Dalén, L., 2024. Temporal dynamics of woolly mammoth genome erosion prior to extinction. *Cell*, 187(14), 3531-3540.
- Sandoval-Velasco, M., Dudchenko, O., Rodríguez, J. A., Estrada, C. P., **Dehasque, M.**, Fontseré, C., ... & Aiden, E. L. (2024). Three-dimensional genome architecture persists in a 52,000-year-old woolly mammoth skin sample. *Cell*, 187(14), 3541-3562.

- Díez-del-Molino, D., **Dehasque, M.**, Chacón-Duque, J.C., Pečnerová, P., Tikhonov, A., Protopopov, A., Plotnikov, V., Kanellidou, F., Nikolskiy, P., Mortensen, P., Danilov, G.K., Vartanyan, S., Gilbert, M.T.P., Lister, A.M., Heintzman, P.D., van der Valk, T., Dalén, L., 2023. Genomics of adaptive evolution in the woolly mammoth. *Current Biology*, 33(9), pp.1753-1764.
- Kutschera, V.E., Kierczak, M., van der Valk, T., von Seth, J., Dussex, N., Lord, E., **Dehasque, M.**, Stanton, D.W.G., Khoonsari, P.E., Nystedt, B., Dalén, L., Díez-del-Molino, D., 2022. GenErode: a bioinformatics pipeline to investigate genome erosion in endangered and extinct species. *BMC Bioinformatics* 23, 1–17.
- van der Valk, T.*, **Dehasque, M.***, Chacón-Duque, J.C., Oskolkov, N., Vartanyan, S., Heintzman, P.D., Pečnerová, P., Díez-Del-Molino, D., Dalén, L., 2022. Evolutionary consequences of genomic deletions and insertions in the woolly mammoth genome. *iScience* 25, 104826.
- **Dehasque, M.**, Pečnerová, P., Lagerholm, V.K., Ersmark, E., Danilov, G.K., Mortensen, P., Vartanyan, S., Dalén, L., 2022. Development and Optimization of a Silica Column-Based Extraction Protocol for Ancient DNA. *Genes*. 13(4), 687.
- Dussex, N., Bergfeldt, N., de Anca Prado, V., **Dehasque, M.**, Díez-Del-Molino, D., Ersmark, E., Kanellidou, F., Larsson, P., Lemež, Š., Lord, E., Mármol-Sánchez, E., Meleg, I.N., Måsviken, J., Naidoo, T., Studerus, J., Vicente, M., von Seth, J., Götherström, A., Dalén, L., Heintzman, P.D., 2021. Integrating multi-taxon palaeogenomes and sedimentary ancient DNA to study past ecosystem dynamics. *Proc. Biol. Sci.* 288, 20211252.
- Rosengren, E., Acatrinei, A., Cruceru, N., **Dehasque, M.**, Haliuc, A., Lord, E., Mircea, C.I., Rusu, I., Mármol-Sánchez, E., Kelemen, B.S., Meleg, I.N., 2021. Ancient Faunal History Revealed by Interdisciplinary Biomolecular Approaches. *Diversity*. 13(1), 1-17.
- Pečnerová, P., Díez-Del-Molino, D., van der Valk, T., **Dehasque, M.**, Götherström, A., Dalén, L., 2021. *Mammuthus* sp. (Early and Middle Pleistocene Mammoths). *Trends Genet.* 37, 682–683.
- **Dehasque, M.**, Pečnerová, P., Muller, H., Tikhonov, A., Nikolskiy, P., Tsigankova, V.I., Danilov, G.K., Díez-del-Molino, D., Vartanyan, S., Dalén, L., Lister, A.M., 2021. Combining Bayesian age models and genetics to investigate population dynamics and extinction of the last mammoths in northern Siberia. *Quaternary Science Reviews*. 259, 106913.
- van der Valk, T., Pečnerová, P., Díez-Del-Molino, D., Bergström, A., Oppenheimer, J., Hartmann, S., Xenikoudakis, G., Thomas, J.A., **Dehasque, M.**, Sağlıcan, E., Fidan, F.R., Barnes, I., Liu, S., Somel, M., Heintzman, P.D., Nikolskiy, P., Shapiro, B., Skoglund, P., Hofreiter, M., Lister, A.M., Götherström, A., Dalén, L., 2021. Million-year-old DNA sheds light on the genomic history of mammoths. *Nature* 591, 265–269.
- Feuerborn, T.R., Palkopoulou, E., van der Valk, T., von Seth, J., Munters, A.R., Pečnerová, P., **Dehasque, M.**, Ureña, I., Ersmark, E., Lagerholm, V.K., Krzewińska, M., Rodríguez-Varela, R., Götherström, A., Dalén, L., Díez-Del-Molino, D., 2020. Competitive mapping allows for the identification and exclusion of human DNA contamination in ancient faunal genomic datasets. *BMC Genomics* 21, 844.
- **Dehasque, M.**, Ávila-Arcos, M.C., Díez-Del-Molino, D., Fumagalli, M., Guschanski, K., Lorenzen, E.D., Malaspinas, A.-S., Marques-Bonet, T., Martin, M.D., Murray, G.G.R., Papadopoulos, A.S.T., Therikildsen, N.O., Wegmann, D., Dalén, L., Foote, A.D., 2020. Inference of natural selection from ancient DNA. *Evol Lett* 4, 94–108.

SCHOLARSHIPS AND AWARDS

2023	Lars Hiertas Minne <i>Research grant, 21,000 SEK</i>
2023	Nilsson-Ehle stipendium <i>Research grant, 93,000 SEK</i>
2023	SMBE Graduate Student Excellence Award, SMBE23, Ferrara, Italy <i>The SMBE Graduate Student Excellence Award honors the best presentation at the Graduate Student Excellence symposium.</i>
2023	Liljevalchs resestipendier <i>Travel stipendium, 7,000 SEK</i>
2023	Albert & Maria Bergströms Stiftelse <i>Travel stipendium, 10,000 SEK</i>
2022	First prize for best student talk at ConsGen22, Scotland
2020	Appointed a personal advisor in the Bioinformatics Advisory Program, Sweden. This is a competitive call.
2020	Riksmusei Vänner Stipendium, Sweden <i>Travel stipendium, 10,000 SEK</i>
2019, 2020	Alice and Lars Silén Fond, Sweden <i>Travel stipendium, 5,500 and 8,000 SEK resp.</i>
2016	Finalist at KETS awards, 2016, Belgium <i>Scientific award for best Belgian thesis in zoology</i>

SELECTED PRESENTATIONS

2023	SMBE Satellite Meeting on Molecular Evolution in Small populations, Princeton University, USA Invited speaker: <i>Temporal dynamics of woolly mammoth genome erosion prior to extinction</i>
2023	PAG 30, San Diego, USA Oral presentation: <i>Temporal dynamics of woolly mammoth genome erosion prior to extinction</i>
2022	ConsGen22, Edinburgh, Scotland Oral presentation: <i>The extinction of the woolly mammoth. What can we learn?</i>
2021	ISBA 9, Virtual conference Oral presentation: <i>Studying selection in mammoths using genome-wide time series data.</i>
2021	Polar forum, Stockholm, Sweden Invited oral presentation: <i>Mammoth Models and How to Date them.</i>
2020	Inaugural symposium of the Centre for Palaeogenetics, Stockholm, Sweden

Invited oral presentation: *Evolution and extinction of the woolly mammoth*.

2019 ESEB, Turku, Finland
Poster presentation: *Optimization of double-stranded library preparation methods for ancient and degraded DNA*.

TEACHING

2022 Methods in molecular life science, Stockholm University
Lecturer: *Permafrost Palaeogenomics*

2019-2021 Conservation Genomics, Stockholm University
Lecturer: *Genetics and extinction, Ancient DNA in conservation*

2018-2020 Palaeoecology, Genetics, and Human Prehistory, Stockholm University
Lecturer: *Using ancient DNA to study selection*
Assistant wet-lab part

SUPERVISION

2020-2021 Foteini Kanellidou
Master's thesis: *Tracking woolly mammoth evolution on Wrangel Island using non-autosomal markers*

2018 Héloïse Müller
Internship: *The woolly mammoth's genetic erosion*

PROFESSIONAL SERVICE AND OUTREACH

Journal refereeing: Molecular Ecology Resources, Current Biology, BMC Ecology and Evolution

2024 Participation in YouTube video "*The Strange DNA of the last mammoths*".
<https://www.youtube.com/watch?v=mf1HWjUJPZM>

2024 Wrote a popular science article for The Conversation
Did inbreeding cause the woolly mammoth's extinction? Our research suggests it was more sudden than that

2024 Organizer of symposium at SBE24, Puerto Vallarta, Mexico
Decoding the past to safeguard the future

2022 Popular science lecture on mammoths for classroom of 16-year-olds.

2019 Participation in Discovery Channel documentary "*Lost Beasts of the Ice Age*". Aired 2019.

2019 Organized Gästabudet
Gästabudet is the annual symposium for PhD students from the Zoology department.

2018,2019

Organized two LET'S (Life Earth Time 'n Space) seminars.

LET's is a seminar series hosted by the Swedish Museum of Natural History to a broader audience interested in life sciences.

- Katerina Douka: *The daughter of a Neanderthal and a Denisovan*
- Mark Thomas: *Genetic Astrology – debunking commercial genetic ancestry claims*