

Erik Hartman

PhD Student in Computational Biology

Lund, Sweden

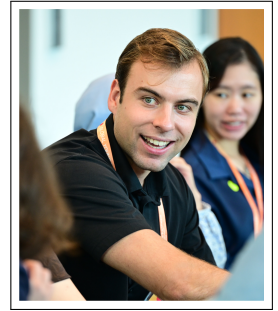
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Born: 1999-09-04



Academic awards & personal grants

- 2025 **Global Young Scientist Summit**, *Singapore*
- 2024 **Career Development Grant**, *Singapore*, Grant: SGD 3,000
- 2024 **Young Promise in Engineering**, *Swedish Chamber of Commerce*, Award: €5,000
- 2024 **EMBO Fellowship Exchange Grant**, *Heidelberg, Germany*, Stipend: €9,000
- 2024 **Anders Wall Award for Young Scientists**, *Stockholm, Sweden*, Award: €20,000
- 2021 **Best BSc Thesis, Clinical Innovation**, *Lund, Sweden*, Award: €1,000
- 2019 **Gold Medal, iGEM**, *Boston, USA*
- 2018 **3rd Place, Intel ISEF (Translational Medicine)**, *Pittsburgh, USA*
- 2018 **1st Place, National Science Competition for Young Scientists**, *Stockholm, Sweden*

Experience

- 2024 – 2025 **Internship**, *Agency for Science, Technology and Research (A*STAR)*, Singapore
Collaborated with Dr. Peter J. Bond as part of my PhD research. (Sponsored by EMBO.)
- 2024 – Present **PhD Student**, *Medical Faculty, Lund University*, Lund, Sweden
Conducting research in computational biology focusing on protein degradation mechanisms for diagnostic and therapeutic applications.
- 2020 – 2024 **Researcher**, *Medical Faculty, Lund University*, Lund, Sweden
Worked in multiple groups at the Department of Infection Medicine.
- 2023 **Machine Learning Developer**, *Qlucore*, Lund, Sweden
Implemented machine learning algorithms to enhance omics data analysis.
- 2022 **Bioinformatic Consultant**, *Dianovator*, Malmö, Sweden
Developed a summary report system for insulin pump algorithms.
- 2019 – 2022 **Tutor & Lecturer**, *LTH and Various Institutions*, Lund, Sweden
Provided tutoring and lecturing in mathematics, chemistry, and data analysis at both high-school and university levels. Designed and supervised computer exercises for the course Data-driven Health (BMEN35) at LTH.

Volunteering

- 2021 – 2024 **Head of board, treasurer**, *Lund Lifting Club (LTK)*, Lund, Sweden
Headed a weightlifting organization with > 150 members. During this time I was also competing in powerlifting at an international level.
- 2019 – 2021 **Head of organization**, *SynthEthics*
Founded and headed a philosophy organization dealing with the ethics of genetic engineering and bioweapons. Held workshops and lectures as well as spread awareness through social media.
- 2018 – Present **Society for Young Scientists**, Sweden
Held different roles. Amongst other things: arranged the national science competition, was a board member. Involved most recently as a judge for the national science competition.

Selected publications

First-authored

- 2025 **Mining the endogenous peptidome for peptide binders with deep learning-driven optimization and molecular simulations**
bioRxiv
Hartman E., Samsudin F., Bond P.J., Schmidtchen A. and Malmström J.
DOI: 10.1101/2025.01.20.633551
- 2024 **Peptide clustering enhances large-scale analyses and reveals proteolytic signatures in mass spectrometry data**
Nature Communications
Hartman E., Forsberg F., Kjellström S., Petrova J., Luo C., Scott A., Puthia M., Malmström J., Schmidtchen A.
DOI: 10.1038/s41467-024-51589-y
- 2023 **Interpreting biologically informed neural networks for enhanced biomarker discovery and pathway analysis**
Nature Communications
Hartman E., Scott A., Malmström L., Malmström J.
DOI: 10.1038/s41467-023-41146-4

Co-authored

- 2023 **Explainable machine learning for the identification of proteome states via the data processing kitchen sink**
bioRxiv
Scott, A.M., Hartman, E., Malmström, J., Malmström, L.
DOI: 10.1101/2023.08.30.555506
- 2023 **Selective protein aggregation confines and inhibits endotoxins in wounds: Linking host defense to amyloid formation**
iScience
Petrova, J., Hartman, E., Petruk, G., Lim, J.C.H., Adav, S.S., Kjellström, S., Puthia, M., Schmidtchen, A.
DOI: 10.1016/j.isci.2023.107951

Education

- 2021–2022 **MSc in Biomedical Engineering**, *Faculty of Engineering, Lund University, Sweden*
- 2018–2021 **BSc in Biomedical Engineering with additional coursework in Molecular Biology**, *Faculty of Engineering, Lund University, Sweden*

Supervision

- 2025 **Felicia Amelie**, *Supervised master thesis work on identifying peptides in plasma.*
- 2025 **Malcolm Siljehag Alencar**, *Supervised project for identifying large scale binders using Bayesian optimization.*

Reviewing

Peer reviewer for: *Nature Communications* (1), *Scientific Reports* (2), *Bioinformatic Advances* (1), and *Naunyn-Schmiedeberg's Archives of Pharmacology* (1).

References

Availability References available upon request.