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Summary

I am a microbiologist combining field observations, experiments and quantitative analysis to study microbial and phytoplankton dynamics in the marine environment. I trained in biogeochemistry and microbial ecology during my PhD and now focus on phytoplankton, automated imaging and time-series analysis. This progression has allowed me to study ecological processes across timescales, from diel cycles to seasonal and across years.

Education

01/09/**2018** – 30/11/**2021**	**PhD, Microbiology and Biogeochemistry**, University of Southern Denmark. Advisors: Bo Thamdrup & Laura Bristow. Award date: 30/11/2021
01/09/**2016** – 15/06/**2018**	**MSc, Aquatic Science and Technology**, Technical University of Denmark. Advisors: Colin Stedmon & Emilio García-Robledo.
01/09/**2013** – 31/05/**2016**	**BSc, Biology**, University of Southern Denmark.

Professional experience

01/11/**2026 – now**	**Postdoctoral researcher**, Department of Biological Sciences, NTNU Ålesund, Norway. Image-based plankton observations.
01/10/**2022** – 31/10/**2026**	**Postdoctoral researcher**, Interuniversity Institute for Marine Sciences in Eilat (IUI), Israel. Marine microbiology and phytoplankton ecology.
01/01/**2022** – 30/06/**2022**	**Field scientist (freelance)**, Birdlife International and BioPol Biotechnology Center, Iceland. Bycatch monitoring in gillnet fisheries.

Publications

- **HGR Steinsdóttir**, D Akkaynak, MJ Frada (2026). Microbial dynamics in coral reef waters: diel cycles in contrasting seasons. *Science Advances* 12(1), eady9534.
- **HGR Steinsdóttir**, C Schauberger, S Mhatre, B Thamdrup, LA Bristow (2022). Aerobic and anaerobic methane oxidation in a seasonally anoxic basin. *Limnology & Oceanography* 67(6), 1257–1273.
- **HGR Steinsdóttir**, E Gómez-Ramírez, S Mhatre, C Schauberger, AD Bertagnolli, ZA Pratte, FJ Stewart, B Thamdrup, LA Bristow (2022). Anaerobic methane oxidation in a coastal oxygen minimum zone: spatial and temporal dynamics. *Environmental Microbiology* 24(5), 2361–2379.
- B Thamdrup, **HGR Steinsdóttir**, AD Bertagnolli, CC Padilla, NV Patin, E García-Robledo, LA Bristow, FJ Stewart (2019). Anaerobic methane oxidation is an important sink for methane in the ocean's largest oxygen minimum zone. *Limnology & Oceanography* 64(6), 2569–2585.

Preprint:

- **HGR Steinsdóttir**, MJ Frada, D Akkaynak (2026). Seasonality of protists in the oligotrophic Gulf of Aqaba revealed by imaging flow cytometry. *BioRxiv* https://doi.org/10.64898/2026.09.09.749164.

Funding

2026	**Rural Development Fund**, Iceland. 500,000 ISK (~€3,500). *For outreach project 'Science Day'.*
2023–2024	**Carlsberg Internationalisation Postdoctoral Fellowship**, Carlsbergfonden, Denmark. 700,000 DKK (~ €95,000)
2022	**IUI postdoctoral fellowship**, Interuniversity Institute for Marine Sciences, Israel, (~$30,000)

Scientific data sets

2026	**Gulf of Aqaba IFCB plankton image library.** Zenodo, DOI: 10.5281/zenodo.20716677. Browse and download here.
2025	**Data archive for Microbial dynamics in coral-reef waters.** Zenodo, DOI: 10.5281/zenodo.14603668; associated sequence data PRJNA1238078. Visualised here.

2022	**Data archive for anaerobic methane oxidation in a coastal oxygen minimum zone.** Zenodo, DOI: 10.5281/zenodo.15872337; associated sequence data: PRJNA771562.
2022	**Sequence data from a seasonally anoxic coastal basin.** NCBI BioProject PRJNA749906. Link here.

Selected conferences and workshops

2025	Israel Association for Aquatic Sciences Conference, Tel Aviv.
2025	Imaging FlowCytobot Workshop, Oslo.
2023	Imaging FlowCytobot Workshop, Woods Hole / Falmouth, MA, USA.
2023	Aquatic Sciences Meeting (ASLO), Mallorca. **Invited speaker**, session SS036, "Methylococcales ecotypes in a coastal oxygen minimum zone."
2020	Responsible Conduct of Research, University of Southern Denmark. *Course on research integrity, open science and FAIR data principles, authorship, and reproducibility.*
2019	International Geobiology Course, Caltech (selected participant; competitive 6-week residential course).

Field work

2023, 2024	Gulf of Aqaba, Israel — microbial and phytoplankton dynamics around coral reefs.
2022	Húnaflói Bay, Iceland — bycatch monitoring, lumpfish gillnet fisheries.
2019, 2020	Golfo Dulce, Costa Rica — biogeochemistry and molecular ecology.
2019	Mariager Fjord, Denmark — biogeochemistry and molecular ecology.
2018	Río Guadalete, Spain — heatwave incubation experiments on intertidal mudflats.
2017	Eastern Tropical North Pacific oxygen minimum zone (Mexico–San Diego cruise) — tracer incubations.
2017	Fram Strait (Svalbard–Greenland) — optical analysis of dissolved organic matter.

Certificates and additional training

2023	AAUS-certified Scientific Diver. *Dry suit. Nitrox. Scooter.*
2023	Powerboat license, ≤150 hp.
2018	Climate-KIC Entrepreneurial Degree — sustainable-business training across three EU partner universities, parallel to MSc.

Teaching and supervision

2026	Co-advisor, MSc thesis: *An imaging-based method for estimating chlorophyll content in seagrass.*
2025	Co-advisor, student elective: *Density and distribution of trichomes on the seagrass Halophila stipulacea*
2020–2021	Mentor, incoming PhD students, University of Southern Denmark.
2019–2021	Teaching assistant, *Plants, Protists and Fungi* (BSc course).
2019–2020	Project supervisor, MSc field course in marine biology and experimental design.
2019	Co-advisor, BSc thesis: *Effect of oxygen on methane oxidation rates in two freshwater ponds.*
2018	Teaching assistant, *Pharmaceutical Toxicology* (BSc course).

Academic service

2022–now	**Journal reviewer:** Limnology & Oceanography, Environmental Microbiology, Scientific Reports.
2026	**Co-chair**, Marine Technologies Conference, University of Haifa. International meeting with confirmed keynotes (Dr Betül Kaçar, Dr Maarja Kruusmaa) and secured funding; cancelled due to regional conflict.
2018–2021	**Well-being representative** for PhD students at Department of Biology. Organised workshops in improv comedy and science communication.

Outreach and volunteering

2026–now	**Initiator and organiser**, Science Day for children in remote villages of North Iceland.

2024–now	**Board member**, Icelandic Eider Association — fundraising and digital infrastructure for a national association supporting research and education on the Common eider.
2021	**Educator**, Odense Science Lab — STEM outreach in middle and high schools.
2019–2022	**Co-founder and board member**, Odense Toastmasters — public speaking and leadership training; organised public debates and speech competitions.