Personal information

Name : Julie Egelund Andersen
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PhD student in predator ecology in soil

I am part of INTERACT (Decoding the Phizobiota Interactive for Improved Crop Resilience). The overall aim of INTERACT is to decode microbial interactions among and between protist, bacteria, fungi and virus in the wheat rhizosphere that will improve plant performance and based on this provide a science-based platform for new more sustainable agricultural practices. I am to focus on protist predators and their effects on the microbiomes of the wheat rhizosphere. The overall objective of my PhD is to 1) identify and characterize essential protists and describe their beneficial and detrimental effects to crop health 2) map microbial communication through secondary metabolites and predation on the microbiome 3) unravel the predation mechanism on cross kingdom community assembling process in rhizosphere. The aim of my first experiment as a PhD student is to detect predator-pray interactions mediated by seconary metabolites by testing the response of three phylogenetically different protist to several different lipopeptides produced by *Pseudomonas* and *Bacillus*.

Professional skills:

- Isolation and cultivation of protist,
- Sterile working
- Flow cytometry
- Fluorescence labelling of bacteria
- Light microscopy
- Fluorescence microscopy
- Electron microscopy
- DNA extraction and transformation
- Plasmid cloning
- CRISPR/Cas9 gene editing
- PCR and primer design
- Sanger sequencing and analysis
- Gel electrophoresis
- HPLC
- Data mamagement
- Statistical analysis of data

Technical skills:

- SAS
- Prism - GraphPad
- Benchling
- CLC Workbench
- LaTeX

Language skills:

Danish (native), English (fluent), German (basic)

Education

PhD student
Aarhus University
2022 - 2025

Master of Science in Biology
University of Copenhagen
2019 - 2021

Specifications

Predator ecology in soil. Focussing on microbial interactions with special emphasis on the protist predator ecology and its effects on the microbiome of the wheat rhizosphere.

Specialilzed in Microbiology with focus on protists diversity and ecology

Accomplishments: A new Arctic variety of the nanoflagellate *Ankylochrysis lutea* was proposed based on my Master's project.

Bachelor of Science in Biology
University of Copenhagen
2015 - 2019

Specialilzed in Cell- and Molecular Biology with focus on molecular- and biotechnical aspecs of bacteria and fungi
Accomplishments: A plasmid containing selective marker genes and a Δgox mutant of *Aspergillus niger*, with an ~ fourfold increase in the citric acid production, was obtained based on my Bachelor's project.

Work Experience

Specifications

PhD student
Aarhus University
2022 - 2025

Predator ecology in soil. INTERACT (Decoding the Rhizobiota Interactive for Improved Crop Resilience) a project financed by Novo Nordisk Foundation.

Quality Assurance Professionel
Novo Nordisk
2022 - 2022

Responsibilities: ensures that the final product observes the company's quality standards and responsible for the development and implementation of inspection activities, the detection and resolution of problems, and the delivery of satisfactory outcomes.
Qualifications: Good manufacturing practise, systematic problem solving.

Laboratory Assistent
AGC Biologist
2017 - 2021

Responsibilities: Facilitating efficient workflows through maintenance of the laboratory working area and equipment and including supporting development work with bioreactors and other *ad hoc* tasks. Entrusted with processing of GMP documents.
Qualifications: Good laboratory and manufacturing practice.

Temporary Supply Assistent
KLIFO
2018 - 2019

Responsibilities: Packaging and labeling of medical products for clinical trails as well as handling of received medical products from sites. Entrusted with handling of logbooks.
Qualifications: Good manufacturing practice.

Voulenteer Work

Specifications

Inspector Collegii (Chairman)
Collegium Mediceum
2019 - 2020

Responsibilities: As elected chairman I was entrusted with key administrative duties, as well as taking seat as member of a commitee responsible for a comprehensive refurbishment of Collegium Mediceum.
Qualifications: Leadership, diplomacy, communication, project management, evaluation of new candidates.

Inspector Fiscii (Treasurer)
Collegium Mediceum
2018 - 2019

Responsibilities: As elected treasurer I was responsible for the financial affairs of the association, as well as being chief liaison between the bank and the association.
Qualifications: Financial control, budgetting, time management.

Laboratory Assistant
University of Copenhagen
2017 - 2017

Responsibilities: In the summer 2017, I volunteered do a project in a molecular lab at the Department of Biology supervised by associate professor emeritus Steen Pedersen.
Qualifications: PCR, gel electrophoresis, recombineering.

Grants

Specifications

"Herboms Boglegat"
2020 + 2021

Supports students enrolled at the University of Copenhagen specialized in botany for purchase of books.

"Kommunitetsstipendiat "
2017 - 2022

Denmark's oldest student bursary with origins in Royal endowments from Frederick II and Christian IV, which supports students enrolled at the University of Copenhagen. I was granted with residence at Collegium Mediceum.

Personal

I am a creative person who enjoy to dance, modern dance in particular. Before initiating my academic career I was admitted to Stepz dance education. Additionally, I am an avid painter, and on Mondays I attend choir lessons.

References

Given upon request.

Publication list:

Andersen, J. E., Moestrup, Ø., Schlüter, L., Daugbjerg, N. Revisiting the marine nanoflagellate Ankylochrysis lutea (Pelagophyceae): a study of an Arctic strain based on light and electron microscopy, pigment profile, phylogeny and autecology. - In preparation -

Yang, L., Henriksen, M. M., Hansen, R. S., Lübeck, M., Vang, J., Andersen, J. E., Bille, S., & Lübeck, P. S. (2020). Metabolic engineering of Aspergillus niger via ribonucleoprotein-based CRISPR–Cas9 system for succinic acid production from renewable biomass. Biotechnology for Biofuels, 13.