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

Research Experience

2024 (Jan.) – *present*: Doctoral candidate, Sustainable Food Processing Group, ETH Zürich and Sandec Eawag Dübendorf. Supervisors: [Alexander Mathys](#) and [Christian Zurbrügg](#)
2023 (Jan.) – 2023 (Dec.): Research Assistant, Monogastric Nutrition Group, Aarhus University
2019-2022: MSc in Biology, Aarhus University
2016-2019: BSc in Biology, Aarhus University

Papers

2024 (Submitted) – Schøn, M.L., Mikkelsen, M.V.N., Jensen, K., Poulsen, J.M., Berggreen, I.E., Schou, T.M., Nørgaard, J.V., and Overgaard J. “Effect of temperature on growth, metabolism, and gas exchange in *Hermetia illucens* larvae reared under commercial and laboratory conditions”

Work in Progress

2024-2025: Review paper on physical properties effecting black soldier fly larvae (BSFL) performance
2023-2024: Collaborating on three articles alongside [Johannes Overgaard](#) and [Kim Jensen](#) on:
1) Similarities of respirometry measurements in laboratory versus industrial settings.
2) Respirometry, growth monitoring and metabolism in BSFL on different diets.
3) BSFL’s nutritional landscapes and macronutrient requirements.
2024-2025: Rewriting my Master’s thesis for publication with guidance from [Martin Holmstrup](#) and [Stine Slotsbo](#).

Involvement in Current Research Projects

Leading Role:

- PhD project: Physical properties in black soldier fly larvae (BSFL) processing. Guidance from [Moritz Gold](#), [Daniela Peguero](#), and [Peter Fischer](#). Supervisors: [Alexander Mathys](#) and [Christian Zurbrügg](#)
- FlyCloud: Focus on BSFL respiration and feed utilization with [Johannes Overgaard](#)

Supporting Role:

- EntoFeed: Studying the nutritional requirements of BSFL in collaboration with [Kim Jensen](#)

Involvement in Previous Research Projects

Supporting Role:

- FlyBreed: Exploring selective breeding in BSF and up-scaling, led by [Morten Kargo](#) and [Hanne Marie Nielsen](#)
- Project for the Danish Veterinary and Food Administration: Assessing the risks of DNA and pesticide transfer from household waste in BSFL and mealworms, led by [Kim Jensen](#)

Supervision Experience

- 2024 (Feb.-Aug.): Supervising Lucas Müller, BSc Food Science, Thesis topic: Influence of Altered Substrate Viscosity on Black Soldier Fly Rearing Performance.
- 2023 (Aug.-Dec.): Co-supervising Mario Márquez Toribio, BSc biologist from Madrid on the effect of antibiotics on growth and respiration in BSFL. The main AU supervisor was [Johannes Overgaard](#)

Speaks and Conferences

- 2024: Talk at Insects to Feed the World conference, Singapore. "Metabolism and growth of BSFL under factory and laboratory conditions"
- 2023: Poster Session at BSF CON, Cambridge, UK. "The use of respirometry for automated monitoring of growth and metabolism in black soldier fly larvae on different diets"
- 2022: Student speaker at the Biology Graduation Party, Aarhus University
- 2021: Student speaker at Aarhus University's Annual Party
<https://www.dansketaler.dk/tale/maja-lermark-schons-tale-ved-aarhus-universitets-arsfest>

Funding Applications

- 2024 (Sep.): Horizon Europe FARM2FORK, Animal nutritional requirements and nutritional value of feed under different production management conditions
- 2023 (Sep.): AUFF NOVA, Aarhus University Research Foundation (Granted: 80.000 €)

BSc and MSc Thesis Topics

- 2020-2022: Master's thesis 60 ECTS | Nutritional geometry | Fatty acids | Optimization | Waste Species: White worms, *Enchytraeus albidus*
Title: "Optimizing the production of Enchytraeus by changes in feed composition"
Objective: Research to further understand the effect of the feed's nutritional composition on the production yield and quality (measured by omega-3 fatty acids) of *E. albidus*. Experimental design focused on Reproduction and Food Choice Tests with waste products. Nutrient content in feed and worm biomass was analyzed and combined with data from previous experiments to examine optimums. The macronutrient compositions effect on key production parameters was visualized in nutritional landscapes. Food Choice Tests revealed that the worms selected the feed that optimized the biomass yield.
Supervisors: Professor [Martin Holmstrup](#) and Senior researcher [Stine Slotsbo](#), Department of Ecoscience, Section for Terrestrial Ecology, Aarhus University.
Professor [Jesper Givskov Sørensen](#), Department of Biology, Section for Genetics, Ecology and Evolution, Aarhus University
- 2019: Bachelor's thesis 10 ECTS | 16S rRNA sequencing | Microbiome | Genetic diversity | Plasticity
Species: African social spider, *Stegodyphus dumicola*,
Title: "Diversity correlations in the microbiome composition in temperature acclimated populations of *Stegodyphus dumicola*".
Objectives: Investigation of population effects and effects of acclimation temperature on microbiomes in inbred social spiders with very low genetic variation. The microbiome community was analyzed by PCR amplification of 16S rRNA (gene sequencing), and subsequent data analysis with identification through barcoding. Inconclusive results but microbiomes are believed to influence spiders co-evolutionary.

Supervisors: [Jesper Smærup Bechsgaard](#), Department of Biology, Section for Genetics, Ecology and Evolution, Aarhus University
[Marie Braad Lund](#), Department of Biology, Section for Microbiology, Aarhus University

University and Department Services

	Level
2019-2022: Academic Council Member	Faculty
2019-2022: The Board of Studies Member	Faculty
2019-2022: Local Working Environment Committee Member	Department
2018-2022: Education Committee Member	Department
2018-2022: Student Council Political Committee Member	Students
2018-2022: Board Member for the Biology Study	Students

References

Available upon request.