

Thesis Position: Bachelor or Master (m/f/d)

RESEARCH FOCUS / THESIS TOPIC

Sources and sinks of oxygen in co-cultures of ammonia oxidizing archaea and nitrite oxidizing bacteria



PRINCIPAL INVESTIGATOR
Dr. Haitao Wang



LOCATION
**AG Prof. Ulrich,
C_FunGene Center**



START DATE
Flexible (ASAP)



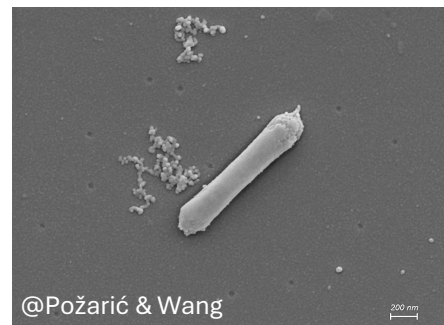
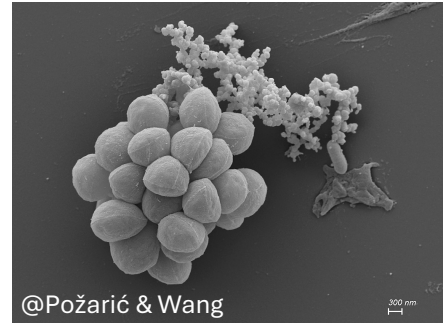
DURATION
B.Sc. / M.Sc. Thesis

THE PROJECT CONTEXT

Can ammonia oxidizing archaea (AOA) produce their own oxygen to support nitrification in anoxic fen peatlands? We are exploring this novel ecological interaction, which could significantly impact ecosystem functioning and greenhouse gas emissions.

KEY RESEARCH QUESTIONS

- What conditions are required for short-term co-cultures of different ammonia and nitrite oxidizers?
- Can oxygen/nitrite produced by AOA serve as a substrate for nitrite oxidizing bacteria?
- How do these dynamics differ between ammonia oxidizing archaea and bacteria?



YOUR RESPONSIBILITIES

- ✓ **Cultivation**
Grow nitrifiers using liquid, plate, & anaerobic techniques.
- ✓ **Assays**
Use micro-respirometry to track O₂ production & consumption.
- ✓ **Quantification**
Apply molecular methods, fluorescent microscopy, & flow cytometry.
- ✓ **Data Analysis**
Interpret experimental data against current literature & present findings.

YOUR PROFILE

- ✓ Enrolled in a Bachelor or Master program in Biology, Biochemistry, Landscape Ecology and Nature Conservation, or a related field.
- ✓ Initial laboratory experience (practical courses or previous internships).
- ✓ Proactive, independent, and can work in a team.

WHAT WE OFFER

Training and daily supervision by **Fran Požarić** (doctoral candidate) and **Dr. Haitao Wang**. Your work will have close interactions with other ongoing projects (e.g., WETSCAPES) in the working group. We can additionally provide a **HiWi** (student assistant) position for other associated projects. More details to be discussed in person.

HOW TO APPLY

Send your application via e-mail to fran.pozaric@uni-greifswald.de and haitao.wang@uni-greifswald.de (in cc).



Subject Line: **Thesis [Your Name]**



Please include: **Your CV and a brief cover letter** outlining your motivation



Learn more: mikrobiologie.uni-greifswald.de