

# Environmental Biogeochemistry Lab

Multidisciplinary research training spans the interface between microbiology, geochemistry, and environmental engineering

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## Lab Statement

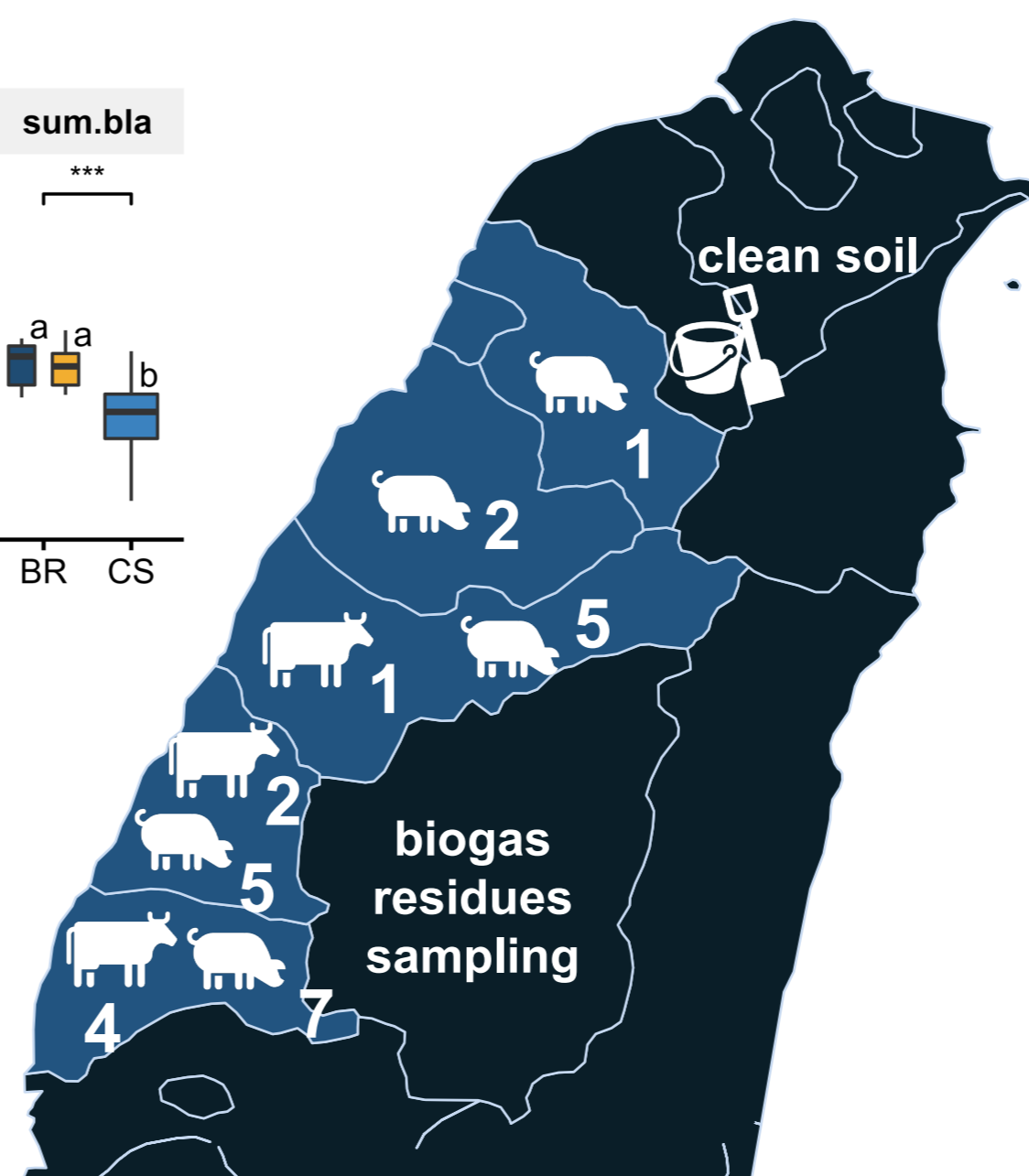
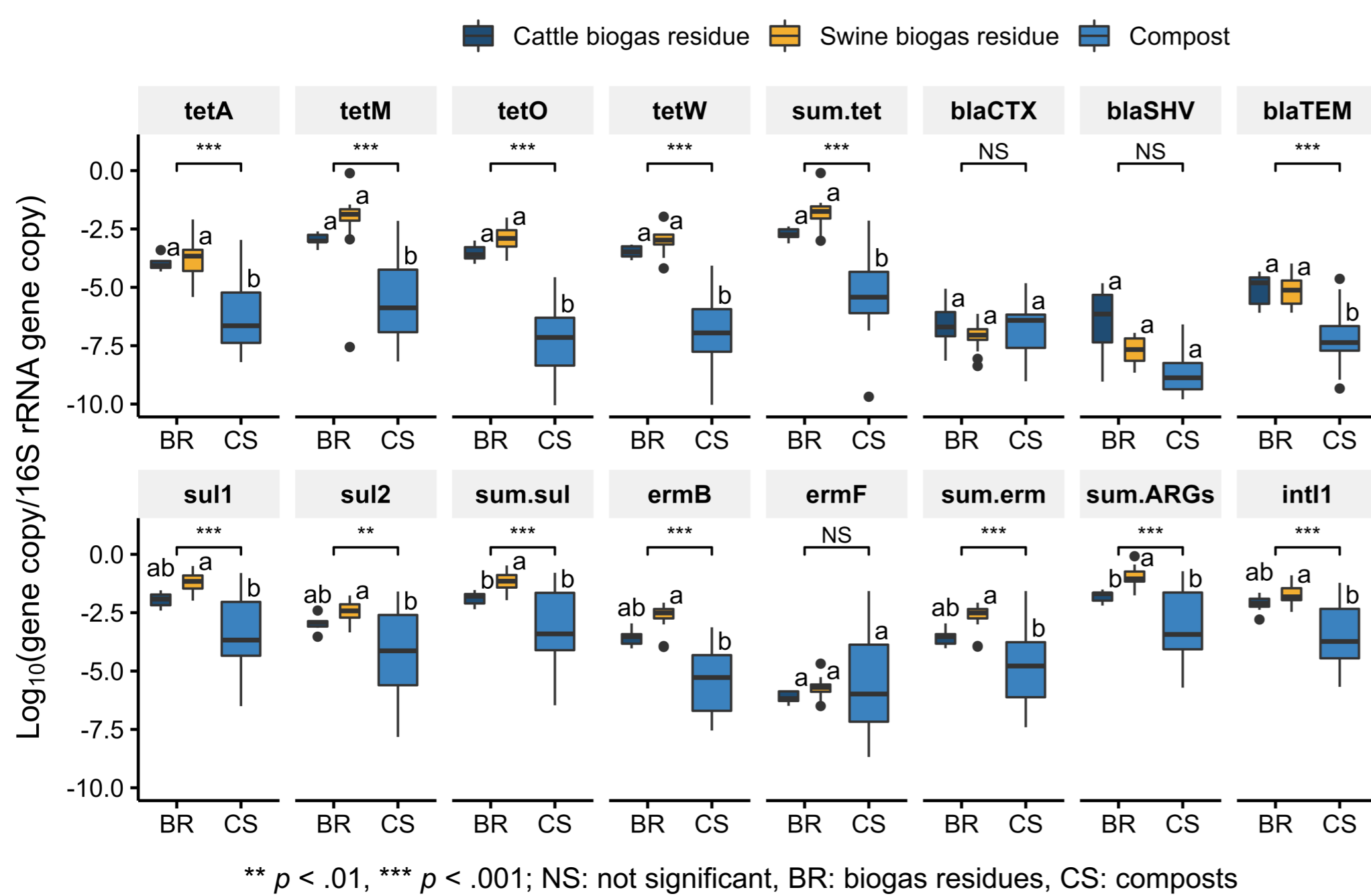
- In this laboratory, we care deeply about the health of our environment.
- We firmly believe that “science is real” and “successful solutions to environmental problems come from fundamental research”.
- We welcome individuals with diverse backgrounds (undergraduate major, race, ethnicity, gender, religion, nationality, sexual orientation, etc.) who are interested in our research and passionate about environmental issues to join us.

## Research Interests

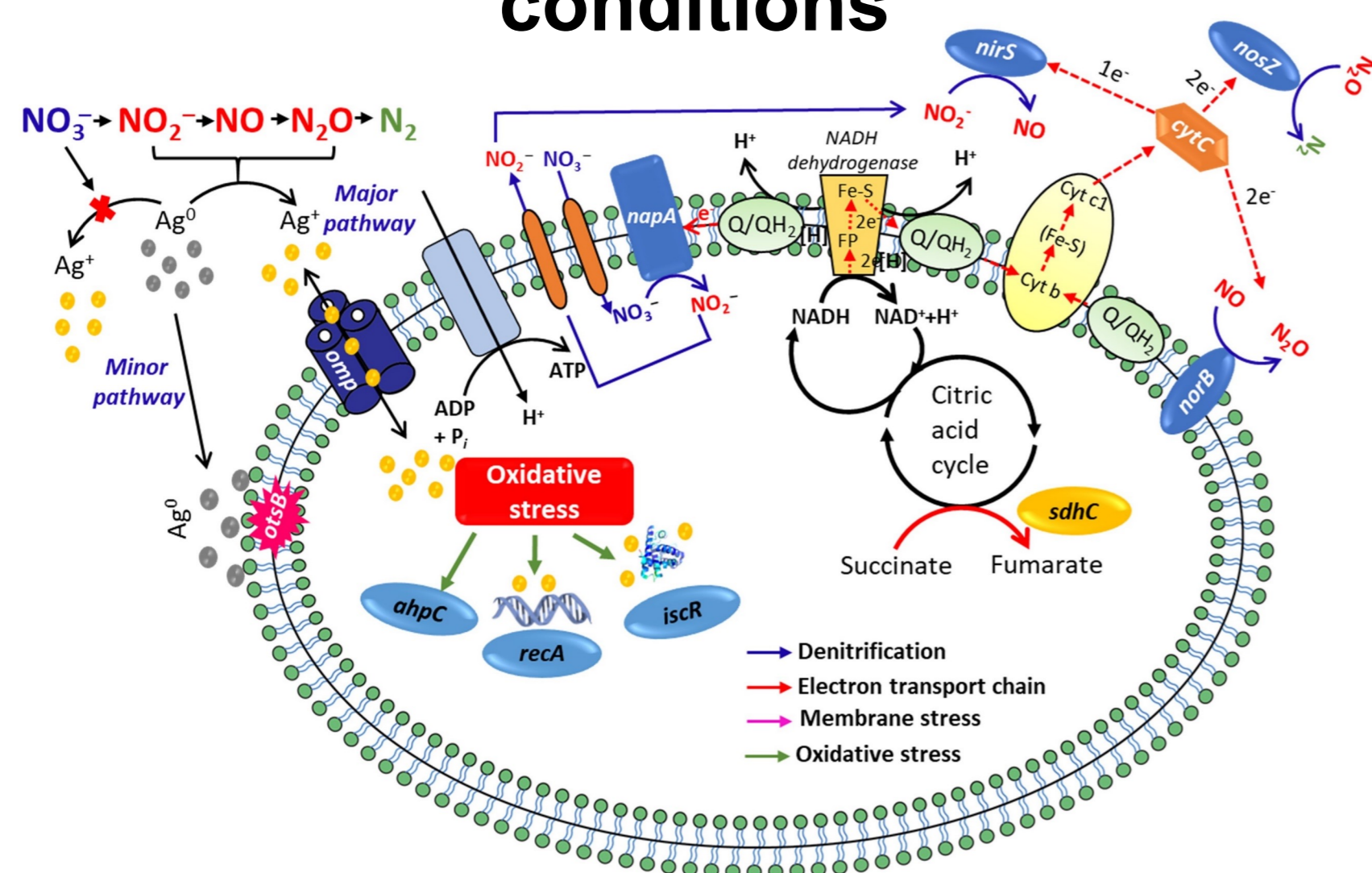
- Eco-friendly *in situ* contamination remediation and GHG mitigation technology
- Environmental emergence and proliferation of antibiotic resistance
- Microbial toxicity of engineered nanoparticles in aquatic systems
- Bioavailability and biogeochemical cycling of trace metal(loid)s

## Selected Projects

### Potential for facilitated proliferation of antibiotic resistance genes in arable soils resulting from biogas residues application as fertilizer



### Stability and bactericidal activity of silver nanoparticles (AgNPs) under denitrifying conditions



### Biochars for *in situ* remediation of rice paddies contaminated with multiple chalcophiles

