

Research area of interest

Systems: Agricultural systems; Recycling of organic waste; Aero-microbiology; Soil Quality; Ecosystems Services

Processes: organic C-cycling, fate and bioremediation of persistent organic pollutants (PAH, pesticides), effects of nanomaterials, risk assessment of microorganisms (Microbial Pest Control Agents, human pathogens, GMO a.o.)

Organisms: Bacteria, Fungi, and Protozoa in the spheres of plants and invertebrates

Members of research group



Anne Winding (senior scientist, deputy head of department) (aw@dmu.dk)
Ulrich Bay Gosewinkel (senior scientist, head of section)
Niels Bohse Hendriksen (senior scientist)
Anders Johansen (senior scientist)
Niels Kroer (head of department)
Tina Thane (technician)
Margit Møller Fernqvist (technician)
Valentina Imparato (PhD student)
Susana Santos (PhD student)
Zuzana Frkova (PhD student)
Ditte Andreasen Søborg (PhD student)

Methods

- PCR-DGGE, RAPD, etc.
- Gene specific PCR
- Cloning, sequencing etc.
- Extracellular Enzyme Activity Assay
- MicroResp
- Microscopy
- Culturing of microorganisms and microfauna

Resources

- qPCR, PCR, DGGE
- MicroOxyMax
- Chameleon Multi Technology Plate Reader
- TOC analyzer
- GC-MS-MS, HPLC, LCMS
- Climate rooms with plant growth chambers
- Access to Risø field sites

Six key publications

Winding, A, Oberender, J. 2012. effects of the secondary metabolite producing *Pseudomonas fluorescens* CHA0 on soil protozoa and bacteria. *Acta Protozoologica*, 51:249-258

Thanh Bui, X, Winding, A, Qvortrup, K, Wolff, A, Bang, DD, Creuzenet, C. Survival of *Campylobacter jejuni* in co-culture with *Acanthamoeba castellanii*: role of amoeba-mediated depletion of dissolved oxygen. *Environ. Microbiology*, 14: 2034–2047

Hendriksen, NB, Carstensen, J. 2013. Long-term survival of *Bacillus thuringiensis* subsp. kurstaki in a field-trial. *Canadian Journal of Microbiology*, 59:34-38

Temkiv, TS, Finster, K, Hansen, BM, Pasic, L, Gosewinkel, UB. 2013 Viable methanotrophic bacteria enriched from air can oxidize methane at cloud-like conditions. *Aerobiologia* DOI 10.1007/s10453-013-9287-1.

Johansen, A, Carter, MS, Jensen, ES, Hauggaard-Nielsen, H, Ambus, P. 2013. Effects of digestate from anaerobically digested cattle slurry and plant materials on soil microbial community and emission of CO₂ and N₂O. *Appl. Soil Ecol.*, 63:36-44

Møller, AK, Barkay, T, Abu Al-Soud, WMAF, Sørensen, SJ, Skov, H, Kroer, N. 2011. Diversity and characterization of mercury-resistant bacteria in snow, freshwater and sea-ice brine from High Arctic. *FEMS Microbiology Ecology*, 75:390-401