



**The Molecular Microbial Ecology Group**  
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### Contact

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### Molecular Techniques

#### - in use:

- Standard rRNA approach (DNA extraction, PCR, cloning, sequencing, phylogeny, FISH)
- RNA extraction, RT-PCR
- qPCR
- T-RFLP, DGGE, ARISA
- Advanced FISH (CARD-FISH, in situ RCA-FISH, mRNA-FISH)
- Single cell capture (laser microdissection microscopy), MDA
- Comparative genomics

#### - on wish list/currently implementing:

- Next generation sequencing & sequence analysis
- (meta) transcriptomics
- Stable isotope probing (SIP) & nanoSIMS
- Microfluidics, single cell genomics
- Improve mRNA quantification, mRNA- and single gene-FISH

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### Current Projects

- Aquatic Nitrogen Cycling: identification, quantification, and regulation of microbes involved in nitrification (amoA, nrx, 16S rRNA), nitrate reduction/denitrification (napA, narG, nirS, nirK, nosZ), nitrous oxide emission, and anammox (16S rRNA)
- Invertebrate –Microbe Symbiosis: identity, evolution and function of specific bacterial symbionts of earthworms, and of marine invertebrates (Tunicates, Xenoturbella...)
- Electric Microbial Communities: identification and activity of microbes involved in electric networks in marine sediment