

## IP4-B3: Lab tour "ProVIS Tour 1: Prospects of nanoSIMS applications"

*Thursday 13 October 2022 11:00 (1h 30m)*

Sample preparation, instrumentation and approaches for single-cell and subcellular SIMS-imaging (nanoSIMS und ToF-SIMS) with preservation of cell structure and chemical composition will be introduced during the tour. Fluorescent labelling via FISH technique and the following microscopic investigation for cell phylogenetic identification and quantification of cell abundance in various environmental samples e.g. soil, water will be explained and showed. Consequent use of laser microdissection system for single cell mapping for further correlative analyses will be demonstrated. Overall, the full workflow from environmental microbial sample to isotope labelling and single cell analyses/imaging to correlate microbial function with identity will be described and showed.

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**Session Classification:** Breakout Session