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UNIVERSITÄT BERN

Seminar über Biomedizinische Photonik

Referent/in: Dr. Felix Mikus, Department of Biochemistry, University of Geneva

Titel: ExÂME – An Expansion Microscopy atlas of eukaryotic ultrastructure

Cell biology has long centred on a handful of model organisms, driving methods tailored to those few species. To extend immunofluorescence microscopy across the eukaryotic tree, we employ expansion microscopy, a technique that physically expands fixed cells within swellable hydrogels, increasing antigen accessibility and enabling imaging of non-model organisms often impermeable to commercial antibodies and dyes.

In close collaboration with culture collections and laboratories nearly 300 distinct species have been fixed, spanning the eukaryotic tree. Combined with the screening of commercial antibodies raised against human epitopes we are now able to extend our investigation into less conserved structures and pathways allowing us to not only map general morphology, cytoskeletal organisation, and mitotic progression, but also endosymbiont co-division and eyespot diversity across microbial eukaryotes.

Zeit: Wednesday 11.11.2026, 10:15 Uhr

Ort: Room A97, ExWi, Sidlerstrasse 5, 3012 Bern