

Lecture Series – Pitfalls and Solutions

Good Experimental Design



Electron microscopy- seeing the invisible (beginner's guide)

Speaker: **Prof. Dr. Andreas Vlachos**
(Department of Neuroanatomy)

Wednesday, 10.04.2019
17:00-18:00

Seminar room window, ZTZ, Breisacher Str. 115

Abstract:

Electron microscopy (EM) utilizes focused electron beams to visualize specimens of interest. Since the wavelength of an electron is up to 100,000 times shorter than that of a photon, EM is capable of resolving atomic structures, whereas most conventional light microscopes are diffraction-limited to ~250 nm resolution. While the first commercially available electron microscopes were produced 80 years ago, new developments in super-resolution microscopy, the rise of cutting-edge electron detector cameras, sophisticated image processing software and access to supercomputing resources has recently triggered a considerable 'renaissance' of EM. This will be a beginner's guide to conventional EM, focusing on some of the general principles and the use of TEM/SEM in ultrastructural analysis of cellular and subcellular structures.

Target group:

Clinician scientists and experimental scientists who are actively involved in lab research

Organised by the Research Management of the Faculty of Medicine, University of Freiburg

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