

Electron crystallography of membrane channels and receptors

Electron crystallography offers atomic scale resolution structural analyses of membrane proteins embedded in the lipid bilayer. Single or double-layered crystals (2D crystals) are reconstituted from the purified detergent solubilized membrane protein of interest in the presence of lipids. Minimizing the lipids interspersed between the membrane proteins and adjusting parameters such as ionic strength, pH and co-factors facilitate crystal packing. 2D crystals are then analyzed by electron microscopy, and high-resolution data are acquired by cryo-electron diffraction.

We seek a highly motivated postdoctoral fellow who wants to work in an inspiring multidisciplinary environment that combines membrane biophysics, cell biology and molecular biology. Candidates having a strong background in membrane biochemistry, crystallography and molecular biology that are interested in membrane protein structural biology are invited to submit their application to andreas.engel@unibas.ch.