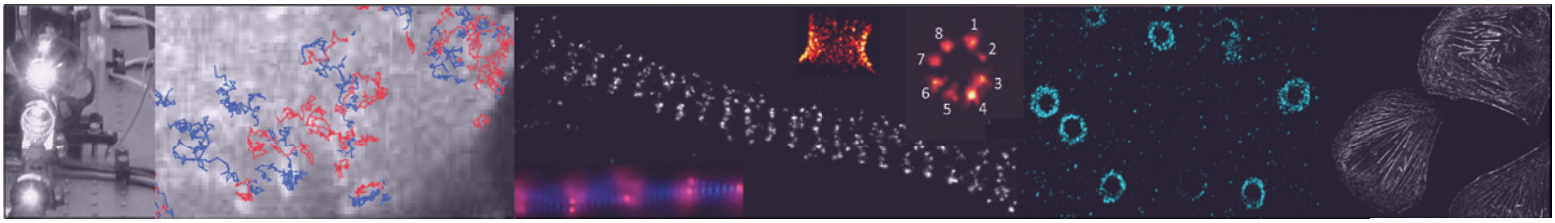

Freie Universität Berlin

Postdoc and PhD-Positions in Nanoscopic Cell Biology of the Membrane Cytoskeleton in Berlin

We are interested in how the cortical cytoskeleton controls the function of the plasma membrane by influencing its properties and by partitioning and organizing its components and interacting factors. We aim to understand, how small signaling units and large multiprotein assemblies are dynamically formed, how their composition is adapted to environmental and developmental changes and how the temporal and spatial coordination fo these processes provides the biophysical local environment necessary to generate an appropriate response to extracellular cues. To this end, we develop and apply single molecule and superresolution microscopy approaches and combine them with computational analysis to study the septin cytskeleton and the assembly and function of the axon initial segment.

A young, technology-oriented cell biology laboratory is looking for coworkers with backgrounds in Biochemistry, Cell Biology, Biophysics, Computer Science or Physics, ideally with a strong interest in membrane Biophysics. They are required to be capable of working in an interdisciplinary environment and as part of a larger scale effort involving Computational Biology, Biochemistry, Cell Biology and Biophysics.

We have one PhD-position on nanoscopic receptor organization in cancer development, one PhD-position in single molecule tracking of membrane secretion and one postdoctoral position in quantitative image processing to fill.

We offer an ambitious environment striving for excellence in scholasticism, experiment, analysis and communication. Substantial resources are available in terms of technical help and state-of-the art technology and assays.

Our laboratory is firmly integrated in the international Superresolution and Cell Biology communities and strongly connected within the scientific environment in Berlin. We strive to support our alumni and former lab members have moved on to postdocs and group leader positions at prestigious institutions.

FU Berlin is one of 11 German universities of excellence and in the Top 100 of world universities across rankings. It has a strong international character and Berlin is one of the top locations for research in Europe with several universities and Max-Planck institutions. Quality of life is high and the cost of living is low.

Please write with a motivation letter, CV and the contact details of 2 references to: helge.ewers@fu-berlin.de

Examples of our work:

Mikhaylova M., Cloin, B.M.C., Finan, K., van den Berg, R., Teeuw, J., Kijanka, M.M., Sokolowski, M., Katrukha, E.A., Maidorn, M. Opazo, F., Moutel, S., Vantard, M. Perez, F.,van Bergen en Henegouwen, P.M.P., Hoogenraad, C.C., Ewers, H.*, and Kapitein, L.C.* Resolving bundled microtubules using anti-tubulin nanobodies. (2015) Nature Communications doi: 10.1038/ncomms8933

Ries, J., Kaplan, C., Platonova, E., Eghlidi, H. and Ewers, H. A simple, versatile method for GFP-based single molecule localization microscopy via nanobodies. (2012) Nature Methods doi: 10.1038/NMETH.1991

Kaplan, C., Jing, B., Winterflood, C.W., Bridges, A.A., Occhipinti, P., Schmied, J., Grinhagens, S., Gronemeyer, T., Tinnefeld, P., Gladfelter, A.S., Ries, J. and Ewers, H. The absolute arrangement of subunits in cytoskeletal septin filaments in cells measured by fluorescence microscopy. (2015) Nano Letters 15(6):3859-64. doi: 10.1021/acs.nanolett.5b00693

Albrecht, D.,* Winterflood, C.M.,* Tschager, T. and Ewers, H. (2016) Nanoscopic compartmentalization of membrane protein motion at the axon initial segment. BioRxiv doi: 10.1101/046375 (pre-publication server)

Ewers, H.*, Roemer, W.*, Smith, A.E., Bacia, K., Dmitrieff, S., Chai, W., Mancini, R., Kartenbeck, J., Chambon, V., Berland, L., Oppenheim, A., Schwarzmann, G., Feizi, T., Schwille, P., Sens, P., Helenius, A. and Johannes, L. (2010) SV40 binding to its receptor, GM1, induces membrane invagination, tubulation and infection. Nature Cell Biology. 12(1) 11-8. doi: 10.1038/ncb1999

http://www.bcp.fu-berlin.de/en/chemie/biochemie/research-groups/ewers-group/index.html

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