

# Postdoc or PhD student for Electron Microscopy in Göttingen/Germany

## Supramolecular Organization of the Protein Machinery of Hormone and Neurotransmitter Exocytosis

At the Max Planck Institute for Experimental Medicine (Dept. for Molecular Neurobiology), the laboratory of **Prof. em. Manfred W. Kilimann** has an opening for a postdoc with solid experience in electron microscopy. Applications from highly qualified PhD students are also welcome.

This project, funded by the German Research Foundation (DFG), builds on previous work by my laboratory which determined, through high-resolution pre-embedding immunogold EM, the molecular topology of Aczonin/Piccolo and other proteins of presynaptic neurotransmitter exocytosis sites at nanometer resolution: Limbach C, Laue MM, Wang X, Hu B, Thiede N, Hultqvist G & Kilimann MW (2011) *Molecular in situ topology of Aczonin/Piccolo and associated proteins at the mammalian neurotransmitter release site*.

**Proc Natl Acad Sci USA** 108, 12579-12580/E392-E401.

See also earlier IEM work by my laboratory in Wang, Herberg, Laue et al., *J Neurosci* 20:8551-65 (2000).

The insights gained, and new questions raised by these studies, are now to be applied to endocrine cells in their tissue context, and to a specialized synapse (the photoreceptor ribbon synapse). This study aims to advance our understanding how the precise 3D organization of the molecular machinery of hormone and neurotransmitter exocytosis contributes to endocrine, paracrine and synaptic cell communication.

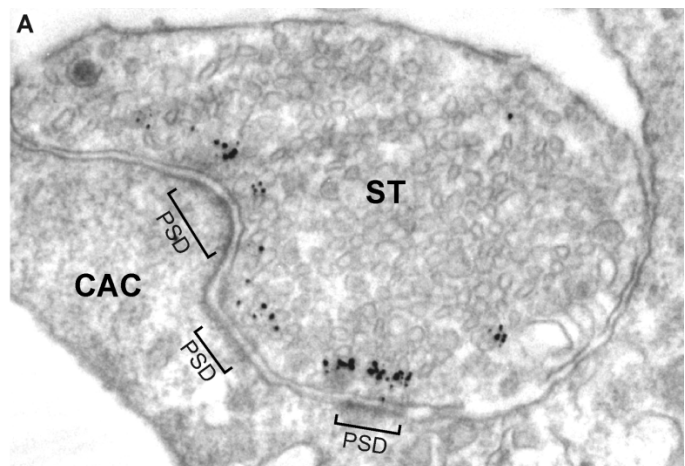
At the outset, this investigation can rely on conventional techniques (pre-embedding nanogold immuno EM) and a large collection of antibodies of proven performance. Additional, state-of-the-art EM techniques (high-pressure cryofixation, TEM computational tomography, FIB-SEM nanoablation tomography) and selected biochemical experiments can later contribute to the scientific productivity.

The Electron Microscopy Core Unit (head: Dr. Wiebke Möbius) of the MPI for Experimental Medicine is exceptionally well equipped with instruments and accessible to all scientists of the Institute. The comprehensive expertise in the use of these instruments and techniques, assembled at the Core Unit and at the Department for Molecular Neurobiology (director: Prof. Nils Brose), will enable the new associate to quickly acquire new techniques, and employ instruments available at few other institutions to generate cutting-edge results. This offers excellent opportunities for scientific and professional growth.

Please address applications to:

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PNAS 108:12579 (2011)