

## Volker Haucke, Prof. Dr.



### RESEARCH INTERESTS AND SCIENTIFIC FOCUS

Clathrin-mediated endocytosis; synaptic vesicle recycling; endosomal membrane traffic & cell signaling; protein-protein & protein-lipid interactions; regulation of phosphoinositide metabolism; neurodegeneration; mouse genetics; in vitro biochemical assays; manipulation of membrane traffic by chemical biological and pharmacological methods (i.e. small molecules); confocal fluorescence, TIRF and super-resolution (STORM, PALM) imaging; electron microscopy; genetics & optogenetics.

### PROFESSIONAL BACKGROUND

- since 2012** Director of the FMP, Head of the Department of Molecular Pharmacology and Cell Biology, and Professor of Molecular Pharmacology, Institute of Pharmacy, Freie Universität Berlin, co-optated to the Charité – Universitätsmedizin Berlin
- 2011 – 2012** Speaker, Collaborative Research Center SFB 958
- 2008 – 2010** Speaker, Collaborative Research Center SFB 449
- 2008 – 2011** Full Professor and Chair, Membrane Biochemistry, Freie Universität and Charité – Universitätsmedizin Berlin
- since 2007** Member of the Neurocure Cluster of Excellence
- 2005 – 2008** Full Professor and Chair, Department of Membrane Biochemistry, Freie Universität Berlin
- 2003 – 2005** Professor of Membrane Biochemistry, Institute for Chemistry and Biochemistry, Freie Universität Berlin
- 2000 – 2003** Independent Group leader at the Center for Biochemistry and Molecular Cell Biology, SFB523, Georg-August University, Göttingen

### PROFESSIONAL DEGREES

- Habilitation:** Biochemistry, Georg-August University Göttingen, Medical Faculty, 2003
- Promotion:** Biochemistry, University of Basel (Switzerland), 1997, Prof. Dr. G. Schatz
- Other degrees:** MSc, Univ. of Basel (Switzerland), 1997, Prof. Dr. G. Schatz

### EDUCATION

- 1997 – 2000** Post-Doc, Yale Univ. School of Medicine & HHMI (with Prof. P. De Camilli)
- 1998** Oxford University (EMBO Short-Term Fellow; with Prof. A. Watts)
- 1997** Ph.D. in Biochemistry, Biozentrum, University of Basel (Switzerland) (summa cum laude) (supervisor: Prof. G. Schatz)
- 1989 – 1994** Studies in Biochemistry & Molecular Biology at the Freie Universität Berlin (FU Berlin) and the University of Basel (Switzerland)

### AWARDS AND HONORS

- 2003** YIP Award of the European Molecular Biology Organization (EMBO)
- 1998** Long-Term Fellowship, Human Frontier Science Program Organization
- 1997** Long-Term Fellowship and Short-Term Fellowship from EMBO
- 1990 – 1993** Fellowship from the Studienstiftung des deutschen Volkes

### FURTHER PROFESSIONAL QUALIFICATIONS

- since 2012** Member of the editorial board of EMBO Reports
- since 2012** Member of the editorial board of Biology of the Cell

<b>since 2008</b>	Member of the Study Section Biochemistry of the DFG
<b>2007 – 2012</b>	Member of the editorial board of the Journal of Biological Chemistry (JBC)
<b>2004 – 2009</b>	Member of the editorial board of Biology of the Cell

#### SCIENTIFIC OUTPUT

> 115 publications in peer-reviewed journals

Supervision of more than 30 graduate students and more than 15 diploma, bachelor, and master students.

Co-Organizer of major international conferences (2003, 2006, 2009, 2013).

#### SHORT BIOGRAPHY

1. Daumke, O., Roux, A., Haucke, V. (2014) BAR domain scaffolds in dynamin-mediated membrane fission. *Cell* **156**, 882-892
2. Posor, Y., Eichhorn-Grünig, M., Puchkov, D., Schöneberg, J., Ullrich, A., Lampe, A., Müller, R., Zerbakhsh, Gulluni, F., Hirsch, E., Krauss, M., Schultz, C., Noe, F., Haucke, V. (2013) Spatiotemporal Control of Endocytosis by Phosphatidylinositol 3,4-Bisphosphate. *Nature*, **499**, 233-237
3. Wieffer, M., Cibrián Uhalte, E., Posor, Y., Otten, C., Branz, K., Schütz, I., Mössinger, J., Schu, P., Abdelilah-Seyfried, S., Krauß, M., Haucke, V. (2013) PI4K2b/ AP-1- based TGN-endosomal sorting regulates Wnt signaling. *Curr Biol.*, **23**, 2185-90
4. Kononenko, N., Diril, M.K., Puchkov, D., Kintscher, M., Koo, S.J., Pfuhl, G, Winter, Y., Wienisch, M., Klingauf, J., Breustedt, J., Schmitz, D., Maritzen, T., Haucke, V. (2013) Compromised fidelity of endocytic synaptic vesicle protein sorting in the absence of stonin 2. *Proc Natl Acad Sci U S A*, **110**, E526-E535
5. Maritzen, T., Zech, T., Schmidt, M.R., Krause, E., Machesky, L.M., Haucke, V. (2012) Gadkin negatively regulates cell spreading and motility via sequestration of the actin-nucleating ARP2/3 complex. *Proc. Natl. Acad. Sci. USA*, **109**, 10382-10387
6. Haucke, V., Neher, E., Sigrist, S.J. (2011) Protein scaffolds in the coupling of synaptic exocytosis and endocytosis. *Nat Rev Neurosci.*, **12**, 125-136
7. von Kleist, L., Stahl Schmidt, W., Bulut, H., Gromova, K., Puchkov, D., Robertson, M., MacGregor, K.A., Tomlin, N., Pechstein, A., Chau, N., Chircop, M., Sakoff, J., von Kries, J., Saenger, W., Kräusslich, H.-G., Shupliakov, O., Robinson, P., McCluskey, A., Haucke, V. (2011) Role of the clathrin terminal domain in regulating coated pit dynamics revealed by small molecule inhibition. *Cell*, **146**, 471-484
8. Koo, S.Y., Markovic, S., Puchkov, D., Mahrenholz, C., Beceren-Braun, F., Maritzen, T., Darnedde, J., Volkmer, R., Oschkinat, O., Haucke, V. (2011) SNARE motif-mediated sorting of synaptobrevin by the endocytic adaptors CALM and AP180 at synapses. *Proc. Natl. Acad. Sci. USA*, **108**, 13540-13545
9. Faelber, K., Posor, Y., Gao, S., Held, M., Roske, Y., Schulze, D., Haucke, V., Noe, F., Daumke, O. (2011) Crystal structure of nucleotide-free dynamin. *Nature*, **477**, 556-560
10. Diril, M. K., Wienisch, M., Jung, N., Klingauf, J., Haucke, V. (2006) Stonin 2 is an AP-2-dependent endocytic sorting adaptor for synaptotagmin internalization. *Dev. Cell*, **10**, 233-244