

Curriculum Vitae - Christian Schubert

Address Dr. Christian Schubert
Konstanzerstr. 67
69126 Heidelberg
Email: schubert@embl.de

Date of Birth 27.11.1974
Place of Birth Regensburg, Germany
Nationality German



Education/Positions

1994 - 1999 **Studies in Biology** at the Ludwig Maximilians University Munich
Subjects: Genetics (main)
Biochemistry
Human Genetics
Physiological Botany

1999 - 08/2000 **Diploma Student** in the group of Dr. Gero Steinberg at the Genetics Institute, LMU Munich
Diploma Thesis on “Characterization of Kin4, a Kar3-like kinesin of the fungus *Ustilago maydis*”
Supervisor: Prof. Regine Kahmann
09.08.2000: Diploma in Biology, final grade 1.1 (very good)

09/2000 - 12/2000 Continued work on the project of the diploma thesis at the Genetics Institute, LMU Munich

01/2001 - 06/2001 Research project at the Adolf-Butenandt-Institute of Cell Biology, Munich

07/2001 - 08/2006 **Graduate Student** in the group of Dr. Alexander Buchberger, Department of Molecular Cell Biology at the Max Planck Institute of Biochemistry, Martinsried
PhD Thesis on “UBX domain proteins: a new family of cofactors for the AAA ATPase Cdc48”
Supervisor: Prof. Stefan Jentsch
Date PhD: 21.08.2006, grade 1.0, “magna cum laude” (very good)

09/2006 - 12/2006 **Postdoc** in the group of Dr. Alexander Buchberger

since 01/2007 **Postdoc** in the group of Dr. Rainer Pepperkok, Cell Biology and Biophysics Unit, European Molecular Biology Laboratory, Heidelberg

Training and Research Experience

Molecular Biology/DNA Analysis

- Classical DNA manipulations: PCR, cloning, directed mutagenesis
- Homologous recombination, gene disruption, siRNA-mediated gene knock-downs
- Southern Blot analysis

Biochemistry/Protein Analysis

- Immuno- and Co-immunoprecipitations, Western Blot analysis
- Recombinant protein purification
- Large-scale yeast protein purification
- *In vivo* protein stability studies: Translation shut off analysis, pulse chase experiments
- Localization studies: GFP-fusions, indirect immunofluorescence studies, membrane fractionation studies, membrane protein topology analysis

Advanced Fluorescence Microscopy Techniques

- Live cell time-lapse imaging
- Multicolour co-localization analysis
- Large scale multiposition (time-lapse) imaging
- Quantitative image data analysis including development of automation strategies

Organism Specific Methods/Techniques

- Yeast genetics: strain constructions, epistasis analysis
- Yeast-Two-Hybrid screening
- Mammalian cell culture: large scale manipulations (e.g. gene knock-downs)
- High-throughput phenotypic screening of mammalian cells (microscopy based)

Other Methods/Experiences

- Sound knowledge of working with radioactivity
- Experiences of working in S2 lab
- Qualified as project leader in genetic engineering and biological safety issues

Awards/Fellowships

Junior Research Award 2006 of the Max Planck Institute of Biochemistry in Munich

Long-term postdoctoral fellow (2007-2009) of the European Molecular Biology Organization

Summary of Current Research

My postdoctoral work comprises a novel systematic approach to identify new components of COPI-independent Golgi-to-ER retrograde transport pathway(s) in eukaryotic cells. To this end, high-throughput RNA interference (RNAi) gene knock-down in human HeLa cells is combined with a phenotypic analysis by an automated fluorescence microscopy system. The computer-based readout of such a screen allows to assay a large number of human genes fast in parallel. Subsequent to the screen, cellular functions of the identified transport factors will be investigated in detail, in particular their impact on the COPI-independent retrograde trafficking of certain bacterial toxins.

Publications

Schubert, C., Richly, H., Rumpf, S. and Buchberger, A. (2004). Shp1 and Ubx2 are adaptors of Cdc48 involved in ubiquitin-dependent protein degradation. *EMBO Rep.* 5, 818-24

Schuchardt, I., Assmann, D., Thines, E., **Schubert, C.** and Steinberg, G. (2005). Myosin-V, Kinesin-1, and Kinesin-3 Cooperate in Long-Distance Transport in Hyphal Growth of the Fungus *Ustilago maydis*. *Mol. Biol. Cell.* 16, 5191-5201

Schubert, C. and Buchberger, A. (2005). Membrane-bound Ubx2 recruits Cdc48 to ubiquitin ligases and their substrates to ensure efficient ER-associated protein degradation. *Nat. Cell Biol.* 7, 999-1006

Schubert, C. and Buchberger, A. (2008). UBX domain proteins: major regulators of the AAA ATPase Cdc48/p97. *Cell. Mol. Life Sci.* 65 (15), 2360-2371
