

## 1 – CURRICULUM VITAE

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### Dr. Silke Wiesner

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### Research Interests

Structural biology, NMR spectroscopy, signal transduction, ubiquitination, cell polarity

### Education and Research Experience

- Since 2017            **Group Leader / Lecturer (“Akademische Rätin”)**, Institute of Physical Biochemistry and Biophysics, University of Regensburg, Germany  
“*Structural biology of ubiquitin-dependent signaling*”
- 2008 - 2017            **Independent Research Group Leader (W2)**, MPI for Developmental Biology, Tübingen, Germany  
“*Structural biology of ubiquitin-dependent signaling*”
- 2003 – 2008            **Postdoc** with Prof. Dr. J.D. Forman-Kay, University of Toronto, Canada  
“*Structural biology of protein complexes in signal transduction and ubiquitination*”
- 2002 – 2003            **Postdoc** with Profs. Drs. M. Sattler and G. Superti-Furga, EMBL Heidelberg, Germany  
“*Structural basis for the association of Bcr-Abl with the cytoskeleton*”
- 1998 – 2002            **PhD Student** with Prof. M. Sattler, EMBL Heidelberg, Germany  
“*NMR studies of the yeast splicing factor Prp40*” (Thesis grade: *summa cum laude*)
- 1997 – 1998            **Diploma Thesis** in Biochemistry with Prof. B. Halle, Lund University, Sweden  
“*Hydration of fatty acid binding protein. A nuclear magnetic relaxation study*”
- 1992 – 1998            **Undergraduate studies** in Biochemistry (Diplom) and Chemistry (Vordiplom), Free University of Berlin, Germany

### Academic Honors and Awards

- 2014 – 2017            IMPRS PhD fellowship (17k € over three years), MPS, Germany
- 2012 –                    Partner in a grant for a 1.2 GHz NMR spectrometer (to be installed at TU Munich)
- 2008 – 2017            Funding for an independent Max Planck Research group, MPS, Germany
- 2010 – 2014            FP7 Marie Curie International Re-Integration Grant, ERC, European Union
- 2004 – 2006            Emmy Noether fellowship (WI 2642/11), DFG, Germany
- 2004                    Postdoctoral fellowship, Research Institute of the Hospital for Sick Children, Canada
- 2003                    PhD, “*summa cum laude*”
- 1999 – 2001            PhD fellowship, Boehringer Ingelheim Fonds, Germany
- 1996 – 1997            ERASMUS fellowship, European Union

### Professional Service

Reviewer for scientific journals (Elife, Structure, PLOS One, Cells, Molecules) and founding agencies (Boehringer Ingelheim Fonds (Germany), Humboldt foundation (Germany), Biotechnology and Biological Sciences Research Council (UK), Telethon (Italy)); external PhD examiner University of Glasgow, UK; Co-organizer “International Workshop on Advanced Isotope Labeling Methods” (2019), Grenoble, France

## Professional Memberships

AcademiaNet (Robert-Bosch-Stiftung, Germany), Gesellschaft Deutscher Chemiker (GdCh), German Society for Biochemistry and Molecular Biology (GBM)

## Invited Talks at Academic Institutions, Conferences and Workshops

- International Workshop on Advanced Isotope Labeling Methods (2019), Grenoble, France
- EMBO Workshop “Modularity of signaling proteins and networks” (2018), Seefeld, Austria
- University of Kassel, Kassel, Germany
- International Workshop on Advanced Isotope Labeling Methods (2017), Grenoble, France
- University of Regensburg (2016), Regensburg, Germany
- University of Tübingen (2016), Tübingen, Germany
- University of Hamburg (2016), Hamburg, Germany
- EMBO Meeting “Ubiquitin and ubiquitin-like modifiers” (2015), Cavtat, Croatia
- University of Constance (2015), Constance, Germany
- MPI of Molecular Cell Biology and Genetics (2014), Dresden, Germany
- Meeting of the Max Planck Biomedical Section (2014), Berlin, Germany
- Murnau Conference on Structural Biology (2014), Murnau, Germany
- EMBO Symposium “Molecular Machines” (2014), EMBL Heidelberg, Germany
- Tri-national NMR Conference (2013), Frauenwörth, Germany
- Leiden Institute of Chemistry (2013), Leiden University, Netherlands
- Institute for Molecules and Materials (2013), Radboud University Nijmegen, Netherlands
- “Ringvorlesung” (2010), Interfaculty Institute of Biochemistry, University of Tübingen, Germany
- EMBL Heidelberg (2007), Germany
- MPI for Developmental Biology (2006), Tübingen, Germany
- MPI for Medical Research (2006), Heidelberg, Germany
- B.I.F. North America Meeting (2004 & 2006), Woods Hole, MA, USA
- Institute for Biochemistry II (2005), Universität Frankfurt, Germany
- Institute for Organic Chemistry (2005), Universität Frankfurt, Germany
- Structural Biology Net Conference (2000), Tällberg, Sweden
- EMBO Practical Course Biomolecular NMR (1999 & 2001), EMBL Heidelberg, Germany

## Teaching Experience

Since 10/2017	Biochemistry practical for Biochemists and Biologists, Structural Biology, Introduction to the Physics practical (for medicine and biochemistry students)
2013 – 2017	Structural biology methods, Course for Master students in Biochemistry, University of Tübingen, Germany; two weeks full time / twice a year
2009 – 2017	Structural biology module for Bachelor students in Biochemistry, University of Tübingen, Germany; 3 days / twice a year
2009 – 2017	PhD courses, MPI for Developmental Biology and University of Tübingen, Germany
1999, 2001	EMBO Practical Course, EMBL Heidelberg, Germany

1996 – 1998      Teaching Assistant in Biochemistry, Free University of Berlin, Germany

**Management skills**

11.2013      EMBO Laboratory Management Course for Group Leaders, Heidelberg, Germany

12.2009      Advanced training according to §15 GenTSV (Biological Safety)

Sep 2018

## 2 – LIST OF PUBLICATIONS

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- Aichele A, Anders S, Catone N, Röbber P, Stotz S, Berg A, Schwab R, Scheuermann S, Bialas J, Schütz-Stoffregen MC, Schmidtke G, Peter C, Groettrup M<sup>§</sup>, **Wiesner S<sup>§</sup>**.  
The structure of the ubiquitin-like modifier FAT10 reveals an alternative targeting mechanism for proteasomal degradation. (2018) *Nat. Comm.* 9(1):3321. doi: 10.1038/s41467-018-05776-3
- Jäckl M, Stollmaier C, Hyz K, Maspero E, Polo S, **Wiesner S<sup>§</sup>**.  
β-sheet augmentation is a conserved mechanism of priming HECT E3 ligases for ubiquitin ligation. (2018) *J. Mol. Biol.* 430(18 Pt B):3218-3233. doi: 10.1016/j.jmb.2018.06.044
- Renschler FA, Brueckner SR, Salomon PL, Mukherjee A, Schütz-Stoffregen MC, Henzler C, Pawson T, Krahn MP, **Wiesner S<sup>§</sup>**.  
Structural basis for the interaction between the cell polarity proteins Par3 and Par6. (2018) *Sci. Signaling* 11(517). pii: eaam9899. doi: 10.1126/scisignal.aam9899.
- Beati H, Peek I, Hordowska P, Honemann-Capito M, Glashauser J, Renschler F, Ramrath A, Luschnig S, **Wiesner S**, Wodarz A.  
The LIM protein Smallish associates with Bazooka/Par-3 and Src at adherens junctions to control epithelial morphogenesis. (2018) *J. Cell Biol.* 5;217(3):1079-1095. doi: 10.1083/jcb.201610098.
- **Wiesner S** & Sprangers R.  
Methyl groups as NMR probes for biomolecular interactions. (2015) *Curr. Opin. Struct. Biol.* 35:60-67
- Mari S\*, Ruetalo N\*, Maspero E, Stoffregen MC, Pasqualato S, Polo S<sup>§</sup>, **Wiesner S<sup>§</sup>**.  
Structural and functional framework for the autoinhibition of Nedd4-family ubiquitin ligases. (2014) *Structure* 22: 1639-49
- Stoffregen MC, Schwer MM, Renschler FA, **Wiesner S<sup>§</sup>**.  
Methionine scanning as an NMR tool for detecting and analyzing biomolecular interaction surfaces. (2012) *Structure* 20: 573-81
- Ogunjimi AA\*, **Wiesner S\***, Briant DJ, Varelas X, Sicheri F, Forman-Kay J, Wrana JL.  
The ubiquitin binding region of the Smurf HECT domain facilitates polyubiquitylation and binding of ubiquitylated substrates. (2010) *J. Biol. Chem.* 285: 6308-15.
- Schreier B, Stumpp C, **Wiesner S**, Höcker B.  
Computational design of ligand binding is not a solved problem. (2009) *Proc. Natl. Acad. Sci. U S A* 106: 18491-6.
- Murphy JM, Hansen DF, **Wiesner S**, Muhandiram DR, Borg M, Smith MJ, Sicheri F, Kay LE, Forman-Kay JD, Pawson T.  
Structural studies of FF domains of the transcription factor CA150 provide insights into the organization of FF domain tandem arrays. (2009) *J. Mol. Biol.* 393: 409-24.
- Bezsonova I, Bruce CM, **Wiesner S**, Lin H, Rotin D, Forman-Kay JD.  
Interactions between the three CIN85 SH3 domains and ubiquitin: implications for CIN85 ubiquitination. (2008) *Biochemistry* 47: 8937-49
- **Wiesner S<sup>§</sup>**, Ogunjimi AA, Wang HR, Rotin D, Sicheri F, Wrana JL<sup>§</sup>, Forman-Kay JD<sup>§</sup>.  
Autoinhibition of the HECT-type ubiquitin ligase Smurf2 through its C2 domain. (2007) *Cell* 130: 651-62

- Hansen DF, Yang D, Feng H, Zhou Z, **Wiesner S**, Bai Y, Kay LE.  
An exchange-free measure of  $^{15}\text{N}$  transverse relaxation: an NMR spectroscopy application to the study of a folding intermediate with pervasive chemical exchange. (2007) *J. Am. Chem. Soc.* 129: 11468-79
- Lundström P, Teilum K, Carstensen T, Bezsonova I, **Wiesner S**, Hansen DF, Religa TL, Akke M, Kay LE.  
Fractional  $^{13}\text{C}$  enrichment of isolated carbons using  $[1-^{13}\text{C}]$ - or  $[2-^{13}\text{C}]$ -glucose facilitates the accurate measurement of dynamics at backbone C-alpha and side-chain methyl positions in proteins. (2007) *J. Biomol. NMR* 38(3):199-212
- **Wiesner S\***, Wybenga-Groot LE\*, Warner N, Lin H, Pawson T, Forman-Kay JD, Sicheri F.  
A change in conformational dynamics underlies the activation of Eph receptor tyrosine kinases. (2006) *EMBO J.* 25: 4686-96
- Gasch A\*, **Wiesner S\***, Martin-Malpartida P, Ramirez-Espain X, Ruiz L, Macias MJ.  
The structure of Prp40 FF1 domain and its interaction with the crn-TPR1 motif of Clf1 gives a new insight into the binding mode of FF domains. (2006) *J. Biol. Chem.* 281: 356-64
- Hantschel O\*, **Wiesner S\***, Güttler T, Mackereth CD, Rix LL, Mikes Z, Dehne J, Görlich D, Sattler M, Superti-Furga G.  
Structural basis for the cytoskeletal association of Bcr-Abl/c-Abl. (2005) *Mol. Cell* 19: 461-73
- **Wiesner S**, Hantschel O, Mackereth CD, Superti-Furga G, Sattler M.  
NMR assignment reveals an alpha-helical fold for the F-actin binding domain of human Bcr-Abl/c-Abl. (2005) *J. Biomol. NMR* 32: 335
- **Wiesner S**, Stier G, Sattler M, Macias MJ.  
Solution structure and ligand recognition of the WW domain pair of the yeast splicing factor Prp40. (2002) *J. Mol. Biol.* 324: 807-822
- Macias MJ, **Wiesner S**, Sudol M.  
WW and SH3 domains, two different scaffolds to recognize proline-rich ligands. (2002) *FEBS Lett.* (Special Issue) 513: 30-37
- **Wiesner S**, Kurian E, Prendergast FG, Halle B.  
Water molecules in the binding cavity of intestinal fatty acid binding protein: Dynamic characterization by water  $^{17}\text{O}$  and  $^2\text{H}$  magnetic relaxation dispersion. (1999) *J. Mol. Biol.* 286: 233-246

### Not peer-reviewed publications

- **Wiesner S**  
The importance of being inactive. (2013) *The Parliament Magazine* 371: 77

\*Equal contribution

<sup>§</sup>Corresponding author

**H-index** (Web of Science): 15

Average of 56.68 citations per publication