Curriculum Vitae

André Hoelz, Ph.D.

Assistant Professor of Chemistry
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EDUCATION

Ph.D. *2004*	**Structural Biology and Biochemistry** The Rockefeller University, New York, NY, U.S.A.
M.Sc. (Diplom) *1997*	**Chemistry and Biochemistry** Albert-Ludwigs University, Freiburg im Breisgau, Germany
B.Sc. (Vordiplom) *1993*	**Chemistry** Albert-Ludwigs University, Freiburg im Breisgau, Germany

RESEARCH AND PROFESSIONAL EXPERIENCE

November 2010 *– present*	**Assistant Professor of Chemistry** California Institute of Technology Division of Chemistry and Chemical Engineering, Pasadena, CA, U.S.A.
September 2009 *– November 2010*	**Research Assistant Professor, Group Leader** Laboratory of Cell Biology, The Rockefeller University, New York, NY, U.S.A.
August 2007 *– August 2009*	**Research Associate, Group Leader** Laboratory of Cell Biology, The Rockefeller University, New York, NY, U.S.A.
August 2004 *– July 2007*	**Postdoctoral Fellow, Group Leader** Sponsor: Günter Blobel, M.D., Ph.D. Laboratory of Cell Biology Howard Hughes Medical Institute The Rockefeller University, New York, NY, U.S.A.
June 2004 *– July 2004*	**Postdoctoral Fellow** Sponsor: Thomas P. Sakmar, M.D. Laboratory of Molecular Biology and Biochemistry Howard Hughes Medical Institute The Rockefeller University, New York, NY, U.S.A.
August 1997 *– July 2004*	**Graduate Fellow** Advisor: John Kuriyan, Ph.D. Laboratories of Molecular Biophysics Howard Hughes Medical Institute The Rockefeller University, New York, NY, U.S.A.
February 1997 *– August 1997*	**Research Associate** Sponsor: Prof. Dr. Karl Decker Institute of Molecular Biology and Biochemistry Department of Medicine Albert-Ludwigs University, Freiburg im Breisgau, Germany

AWARDS & HONORS

2012 – 2014	**Kimmel Scholar Award** Sidney Kimmel Foundation for Cancer Research
2011 – 2014	**54th Mallinckrodt Scholar Award** Edward Mallinckrodt, Jr. Foundation
2010 – 2012	**Albert Wyrick V Scholar Award** The V Foundation for Cancer Research
2009	**Science Highlight 2009** Advanced Photon Source, Argonne National Laboratory
2008	**Science Highlight 2008** Advanced Light Source, Lawrence Berkeley National Laboratory
2007	**Science Highlight 2007** National Synchrotron Light Source, Brookhaven National Laboratory
1991	**Prize of the "Fonds der Chemischen Industrie"** Academic proficiency; best chemistry student of the year

GRANTS AND FELLOWSHIPS

2005 – 2010	**Leukemia & Lymphoma Society Specialized Center of Research Grant** Specialized Center for the Study of Myeloid Malignancies (with Günter Blobel)
2003 – 2004	**Murray Foundation Postdoctoral Fellowship** The Murray Foundation
1999 – 2003	**Burroughs Wellcome Fund Pre-Doctoral Fellowship** Burroughs Wellcome Fund, Interfaces in Science Program
1997 – 2003	**David Rockefeller Graduate Program Fellowship**

INVITED LECTURES

February 2013	**Chemistry Department, University of California, Los Angeles, CA**
October 2012	**MCB Department, University of California, Berkeley, CA**
November 2010	**Biochemistry Center, University of Heidelberg, Heidelberg, Germany**
April 2010	**Special Seminar Series, Chromocell Corporation, North Brunswick, NJ**
September 2009	***"Lectio Magistralis"*, EMBO Molecular Medicine Workshop "Invasive Growth: a Genetic Program for Stems Cells and Cancer", Turin, Italy**
May 2009	**Special Seminar Series, The Rockefeller University, New York, NY**
February 2009	**Biochemistry Department, Oxford University, Oxford, UK**
September 2008	**International Conference on Structural Genomics (ISGO 2008), Oxford, UK**
September 2008	**Summer School "Chromatin & Transcription", Spetses, Greece**
April 2008	**ACS National Meeting & Exposition, "Lysine-specific demethylase 1 (LSD1) as a target for antitumor therapy symposium", New Orleans, LA**
March 2008	**Max Planck Institute of Biochemistry, Munich, Germany**

March 2008 **European Molecular Biology Laboratory (EMBL), Heidelberg, Germany**

March 2008 **Meeting "Conformational Transitions in Macromolecular Interactions", Graduiertenkolleg, University of Halle, Germany**

PROFESSIONAL ORGANIZATIONS

2008 – present **The American Society for Cell Biology**

2008 – present **American Chemical Society**

2003 – present **New York Academy of Sciences**

1993 – present **German Chemical Society (Gesellschaft Deutscher Chemiker, GDCh)**

PUBLICATIONS (* Corresponding author)

29. Lin, D.H., Zimmermann, S., Stuwe, T., Stuwe, E., **Hoelz, A.*** (2013). Crystal structure of the C-terminal domain of Nup358/RanBP2. **J. Mol. Biol.** *425*, 1318-1329.

    ** featured on the **COVER**

28. Kassube, S.A., Stuwe, T.S., Lin, D.H., Antonuk, C.D., Napetschnig, J., Blobel, G.*, **Hoelz, A.*** (2012). Crystal structure of the N-terminal domain of Nup358/RanBP2. **J. Mol. Biol.** *423*, 752-765.

27. Stuwe, T., Schada von Borzyskowski, L., Davenport, A.M., **Hoelz, A.*** (2012). Molecular Basis for the Anchoring of Proto-Oncoprotein Nup98 to the Cytoplasmic Face of the Nuclear Pore Complex. **J. Mol. Biol.** *419,* 330-346.

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26. Yoshida, K., Seo, H.S., Debler, E.W., Blobel, G.*, **Hoelz, A.*** (2011). Structural and functional analysis of an essential nucleoporin heterotrimer on the cytoplasmic face of the nuclear pore complex. **Proc. Natl. Acad. Sci. USA** *108,* 16571-16576.

25. King, H.A., **Hoelz, A.**, Crane, B.R.*, Young, M.W.* (2011). Structure of an enclosed dimer Formed by the drosophila period protein. **J. Mol. Biol.** *413*, 561-572.

24. Stuwe, T., **Hoelz, A.*** (2011). Rae1: A new clue for nucleoporin leukemias, **Cell Cycle** *10*, 2056.

23. **Hoelz, A.**,*,** Debler, E.W., Blobel, G. (2011). Structure of the Nuclear Pore Complex, **Annu. Rev. Biochem.** *80*, *613-643.*

    ** invited author

22. Hsia, K.C., **Hoelz, A.*** (2010). Crystal structure of α-COP in complex with ε-COP provides insight into the architecture of the COPI vesicular coat. **Proc. Natl. Acad. Sci. USA** *107*, 11271-11276.

21. Ren, Y., Seo, H.S., Blobel, G.*, **Hoelz, A.*** (2010). Structural and functional analysis of the interaction between the nucleoporin Nup98 and the mRNA export factor Rae1. **Proc. Natl. Acad. Sci. USA** *107*, 10406-10411.

20. Debler, E.W., Hsia, K.C., Nagy, V., Seo, H.S., **Hoelz, A.*** (2010). Characterization of the membrane-coating Nup84 complex: Paradigm for the nuclear pore complex structure. **Nucleus** *1*, 150-156.

19. Nagy, V., Hsia, K.C., Debler, E.W., Kampmann, M., Davenport, A.M., Blobel, G.*, **Hoelz, A.*** (2009). Structure of a trimeric nucleoporin complex reveals alternate oligomerization states. **Proc. Natl. Acad. Sci. USA** *106*, 17693-17698.

18. Seo, H.S., Ma, Y., Debler, E.W., Wacker, D., Kutik, S., Blobel, G.*, **Hoelz, A.*** (2009). Structural and functional analysis of Nup120 suggests ring formation of the Nup84 complex. **Proc. Natl. Acad. Sci. USA** *106,* 14281-14286.

17. Debler, E.W.*, Blobel, G.*, **Hoelz, A.*** (2009). Nuclear transport comes full circle. **Nat. Struct. Mol. Biol.** *16*, 457-459.

16. Napetschnig, J., Kassube, S.A., Debler, E.W., Wong, R.W., Blobel, G.* and **Hoelz, A.*** (2009). Structural and functional analysis of the interaction between the nucleoporin Nup214 and the DEAD-box helicase Ddx19. **Proc. Natl. Acad. Sci. USA** *106*, 3089-3094.

15. Debler, E.W., Ma, Y., Seo, H.S., Hsia, K.C., Noriega, T.R., Blobel, G.*, **Hoelz, A.*** (2008). A fence-like coat for the nuclear pore membrane. **Mol. Cell** *32*, 815-826.

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14. Stavropoulos, P., Nagy, V., Blobel G.*, **Hoelz A.*** (2008). Molecular basis for the autoregulation of the protein acetyl transferase Rtt109. **Proc. Natl. Acad. Sci. USA** *105*, 12236-12241.

13. Hsia, K.C., Stavropoulos, P., Blobel, G.*****, **Hoelz, A.*** (2007) Architecture of a coat for the nuclear pore membrane. **Cell** *131*, 1313-1326.

12. Stavropoulos, P. and **Hoelz, A.*** (2007) Lysine-specific demethylase 1 as a potential therapeutic target. **Expert Opin. Ther. Targets** *11*, 809-920.

11. Melcak, I., **Hoelz, A.***, Blobel, G.* (2007). Structure of Nup58/45 suggests flexible nuclear pore diameter by intermolecular sliding. **Science** *315*, 1729-1732.

    ** highlighted in **Cell** and the **Journal of Cell Biology**

10. Napetschnig, J., Blobel, G.*, **Hoelz, A.*** (2007). Crystal structure of the N-terminal domain of the human protooncogene Nup214/CAN. **Proc. Natl. Acad. Sci. USA** *104*, 1783-1788.

9. Pirruccello, M., Sondermann, H., Pelton, J.G., Pellicena, P., **Hoelz, A.,** Chernoff, J., Wemmer, D.E., Kuriyan, J. (2006). A dimeric kinase assembly underlying autophosphorylation in the p21 activated kinases. **J. Mol. Biol.** *361*, 312-326.

8. Stavropoulos, P., Blobel, G., **Hoelz, A.*** (2006). Crystal structure and mechanism of human lysine-specific demethylase-1. **Nat. Struct. Mol. Biol.** *13*, 626-632.

    ** highlighted in **Molecular Cell**
    ** **Faculty of 1000, must read**

7. **Hoelz, A.**,* Janz, J.M., Lawrie, S.D., Corwin, B., Lee, A., Sakmar, T.P.* (2006). Crystal structure of the SH3 domain of βPIX in complex with a high affinity peptide from PAK2. **J. Mol. Biol.** *358*, 509-522.

6. Rosenberg, O.S., Deindl, S., Comolli, L.R., **Hoelz, A.**, Downing, K.H., Nairn, A.C., Kuriyan, J. (2006). Oligomerization states of the association domain and the holoenyzme of Ca2+/CaM kinase II. **FEBS J.** *273*, 682-694.

    ** featured on the **COVER**

5. **Hoelz, A.**,* Blobel, G.* (2004). Cell biology: popping out of the nucleus. **Nature** *432*, 815-816.

4. **Hoelz, A.,** Nairn, A. C., Kuriyan, J. (2003). Crystal structure of a tetradecameric assembly of the association domain of Ca2+/calmodulin-dependent kinase II. **Mol. Cell** *11*, 1241-1251.

    ** featured on the **COVER**, highlighted in **Nature Reviews Molecular Cell Biology**

3. Margarit, S. M., Sondermann, H., Hall, B. E., Nagar, B., **Hoelz, A.,** Pirruccello, M., Bar-Sagi, D., Kuriyan, J. (2003). Structural evidence for feedback activation by Ras•GTP of the Ras-specific nucleotide exchange factor SOS. **Cell** *112*, 685-695.

** **Faculty of 1000, must read**

2. Schenk, S., **Hoelz, A.,** Decker, K. (1999) A novel heterotrimeric flavoprotein involved in bacterial nicotine degradation. In Flavins and Flavoproteins, Ghisla, S., Kroneck, P., Macheroux, P., Sund, H., eds., (Rudolf Weber, Berlin. Agency for Scientific Publications), pp. 427-430.

1. Schenk, S., **Hoelz, A.,** Krauß, B., Decker, K. (1998). Gene structures and properties of enzymes of the plasmid-encoded nicotine catabolism of Arthrobacter nicotinovorans. **J. Mol. Biol.** *284*, 1323-1339.