

## CURRICULUM VITAE

**HOENGER Andreas Ph. D.**

born: 24.11.1962, Basel, Switzerland

### **Present Address:**

University of Colorado at Boulder  
Dept. of Mol. Cell. and Dev. Biology  
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Languages: German (native)  
English (very proficient)  
French (proficient)  
Spanish (basic)

## PROFESSIONAL EXPERIENCE:

- August 2013 - present      **Full Professor** at the Department of Molecular, Cellular and Developmental Biology, Univ. of Colorado at Boulder, CO, USA
- February 2006 - August 2013:      **Associate Professor** at the Department of Molecular, Cellular and Developmental Biology, Univ. of Colorado at Boulder, CO, USA.
- Since February 2006      **Director** of the Boulder NIH-NCRR (from June 2012: NIH-NIGMS) facility for the 3-D Structure of Cells.
- January 1998 - January 2006:      **Research Group Leader and Head of the Electron Microscopy Facility** at the EMBL-Heidelberg, Structural Biology and Biocomputing Program, Heidelberg, Germany.
- April 1997 - December 1997:      **Postdoctoral position** in the laboratory of Dr. Heinz Gross, ETH Zuerich-Hoenggerberg, Zuerich, Switzerland.
- December 1996 - March 1997:      Short-term **postdoctoral position** in the laboratory of Prof. Ueli Aebi, M. E. Mueller-Institute for Structural Biology, Biocenter, University of Basel, Basel, Switzerland.
- April 1993 - November 1996      **Postdoctoral position** in the laboratory of Dr. Ronald A. Milligan at the Scripps Research Institute, Dept. of Cell Biology, La Jolla, CA, USA.
- May 1989 - March 1993:      **Ph.D.-Thesis** in the laboratory of Prof. Andreas Engel, M. E. Mueller-Institute for Structural Biology, Biocenter, University of Basel, Basel, Switzerland. Title: *Structural and Topological Analyses of E. coli Outer Membrane Porin-LPS Complexes.*
- November 1983 - April 1989:      Biology II Curriculum (Molecular Biology / Genetics / Biochemistry / Structural Biology / Biophysics) at the Biocenter, University of Basel, Basel, Switzerland. **Diploma in Biology II.**

## POSTDOCTORAL FELLOWSHIPS:

- May 1993 - April      Research fellowship from the University of Basel Committee of the **Swiss**

- 1994: **National Science Foundation**, Basel, Switzerland.
- February 1994: Research supplement from the **CIBA-GEIGY Anniversary Foundation**, Basel, Switzerland.
- May 1994 - April 1996: Two-year research fellowship from the **Human Frontier Science Program Organization**, Strasbourg, France.
- May 1994 - April 1996: Research fellowship for advanced scientists from the **Swiss National Science Foundation**, Bern, Switzerland. (Not accepted due to parallel funding from HFSP as mentioned above).
- May 1996 - November 1996: Short term research fellowship from the **ROCHE Research Foundation**, Basel, Switzerland.

### PREVIOUS AND CURRENT FUNDING:

- May 1997 - April 1999: Co-applicant (principal investigator: Dr. Heinz Gross, ETH-Zuerich Hoenggerberg) on a grant from the **Swiss National Science Foundation**, Bern, Switzerland.
- 1999 - 2005: Member on the **DFG priority program "Molecular Motors"**. DFG-grants Ho2276/1-1, Ho2276/1-2 and Ho2276/1-3 (providing funds for one postdoctoral salary according to BAT IIa plus equipment/travel support until August 2005). My role: PI.
- March 2002: Coordinator of an application submitted to the **Bundesministerium fuer Bildung und Forschung (BMBF) Proteomics Program**. Funding volume: € 1 Mio. for the purchase of a He-stage electron microscope, granted in Juli 2003. My role: PI.
- 2002 – January 2006: Member of the steering committee in the **EU network of excellence** within the sixth framework of EU funding in 3-D approaches in cryo-electron microscopy.
- August 2006 - 2009: **NIH-NCRR: 2P41RR000592-36 - 38: P-41 Center grant for the Boulder Laboratory for 3 Microscopy of Cells**. My role: PI. (\$954,497 p/a)
- September 2007 - 2011: **NIH-NIGMS: 1R01GM080993-01: A Clonable High-Density for 3-D Electron Microscopy of Cellular Structures**. My role: PI. (\$262,120 p/a).
- Since August 2009: **NIH-NCRR: 2P41RR000592-39 - 43: P-41 Center grant for the Boulder Laboratory for 3 Microscopy of Cells**. My role: PI. (\$1,074,520 p/a)
- Since Sept. 2010: **Human Frontier Science Program: Grant RGP0007/2010**. My role: Co-PI (with D. Brunner, Univ. Zuerich, CH, and E.L. Florin, Univ. of Texas Austin). (\$100,000 p/a)
- Pending: **NIH-NIGMS: 1R01GM088168-01: Structural Analysis of Intermediate Filaments by Cryo-Electron Microscopy**
- February, 2014: **NIH-NIGMS: 1R01GM113082-01: The Role of Septins in Glucose Starved S. pombe Cells**. My role: PI. Effort: 2 months summer salary

May, 2014: **NIH-NIGMS: 1R01GM113950-01: Structure and Function of Heterodimeric Kinesin-2 Motor Head Domains.**  
My role: PI. Effort: 2 months summer salary

## **MEMBERSHIPS IN SCIENTIFIC ORGANIZATIONS:**

Since 1989: Member of the **Swiss Society for Optics and Electron Microscopy (SGOEM)**.

Since 1994: Member of the **American Society of Cell Biology (ASCB)**.

Since 1999: Member of the **German Society for Biochemistry and Molecular Biology (GBM)**

Since 2004: Member of the “**German Society for Cellbiology (DGZ)**”

Since 2007: Member of the “**Microscopy Society of America (MSA)**”

Member of the editorial boards of **Journal Structural Biology** (2007-2014), the **Philosophical Transactions of the Royal Society A** (TransA, 2007 – 2009), and the **Journal of Nanobiotechnology** (since 2011).

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## **IMPORTANT SCIENTIFIC COLLABORATIONS:**

Due to the nature of the NCCR facility I am directing in Boulder we have a large number of collaborations with a various labs in the United States and worldwide. Most of these collaborations request some sort of electron microscopy service and/or training support. I am happy to provide a list of these activities separately upon request. The list below mentions collaborations with labs that are or were relevant to my immediate research interests.

**Ueli Aebi (Biocenter, Univ. of Basel, Switzerland):** Analysis of structure, function and assembly properties of intermediate filaments (in particular vimentins and desmins) by cryo-electron microscopy (cryo-EM and cryo-electron tomography (cryo-ET)).

**Heinz Gross (Swiss Federal Technical Highschool (ETH) Zuerich, Switzerland):** High-resolution shadowing of various microtubule-motor complexes.

**Eckhard and Eva Mandelkow (Max Planck Unit, Desy-Hamburg, Germany):** Structure-function 3-D analysis of kinesin-microtubule complexes by cryo-electron microscopy and helical 3-D reconstruction.

**Isabelle Vernos (EMBL-Heidelberg, Germany, now: CRG-Barcelona, Spain):** Structural and functional analyses of the hetero-dimeric kinesin-2 Xklp2.

**Harald Herrmann (German Cancer Research Center (DKFZ) Heidelberg, Germany):** Analysis of structure, function and assembly properties of intermediate filaments (in particular vimentins and desmins) by cryo-electron microscopy (cryo-EM and cryo-electron tomography (cryo-ET)).

**Susan P. Gilbert (Rensselaer Polytech Institute (RPI) Troy, NY, USA)** Structure-function 3-D analysis of Eg5 and Kar3Vik1 kinesin-microtubule complexes by cryo-electron microscopy and helical 3-D reconstruction.

**Ivan Rayment (Univ. of Wisconsin, Madison, WI, USA):** Structure-function 3-D analysis of Kar3Vik1 kinesin-microtubule complexes by cryo-electron microscopy and helical 3-D reconstruction.

**Victor Small and Guenther Resch (Univ. of Vienna, Austria):** Cryo-EM of branched cellular actin meshworks.

**Damian Brunner (EMBL-Heidelberg, Germany, now: Univ. of Zuerich, Switzerland):** Structure-function 3-D analysis of Mal3p-microtubule complexes by cryo-electron microscopy and high-resolution surface shadowing. Structural investigations into the molecular involvement of septins during cytoplasmic freezing in starved *S. pombe* cells (HFSP-funded project with Florin).

**Ernst-Ludwig Florin (Univ. of Texas, Austin TX, USA):** Structural investigations into the molecular involvement of septins during cytoplasmic freezing in starved *S. pombe* cells (HFSP-funded project with Brunner).

**Peter Kohl (Univ. of Oxford and Imperial College UK):** 3-D structure of cardio-myocytes.

**Michael Glotzer (IMP-Vienna, Austria, now: Univ. of Chicago, IL, USA):** Structure-function 3-D analysis of the centralspindlin-microtubule complex by cryo-electron microscopy and high-resolution surface shadowing.

**Stavros Hamodrakas (Univ. of Athens, Greece):** Electron microscopy of artificial and natural amyloid fibers

**Scott Dawson (Univ of California Davis):** Structure and function of the ventral disc of *Giardia Intestinalis*.

**Mark Winey (Univ. of Colorado at Boulder, MCDB):** Development of metallothionein as a clonable high-density marker for cellular (cryo-) 3-D electron microscopy.

**Gia K. Voeltz (Univ. of Colorado at Boulder, MCDB):** Electron tomography analysis of the tubular endoplasmatic reticulum (ER) network.

**Robert L. Garcea (Univ. of Colorado at Boulder, MCDB):** Electron tomography analysis of nuclear virus factories in Polyomavirus-infected cells.

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## **TEACHING ACTIVITIES AT THE UNIVERSITY OF COLORADO (SINCE 2006):**

**2014 (as of August 2014):**

**MCDB 5210:** “Graduate Core Course”, Spring Semester.

**MCDB-3145:** “Molecular Cell Biology”, Spring Semester.

**MCDB 3105:** “Structural Methods for Biological Macromolecules”. Fall Semester.

**2013:**

**MCDB 5210:** “Graduate Core Course”, Spring Semester.

**MCDB 4105:** “Structural Methods for Biological Macromolecules”. Fall Semester.

**MCDB 5250:** “Methods & Logic”

**2012:**

**MCDB 5210:** “Graduate Core Course”, Spring Semester.

**MCDB-3145:** “Molecular Cell Biology”, Spring Semester.

**MCDB 4105:** “Structural Methods for Biological Macromolecules”. Fall Semester.

**2011:**

**MCDB 5210** “Graduate Core Course” – Spring Semester.

IMOD practical course of the NCRR Boulder 3-D Lab at MCDB (Aug. 2<sup>nd</sup> – 5<sup>th</sup> 2011).

**MCDB 4105:** (Structural Methods for Biological Macromolecules). Fall Semester.

**2010:**

**MCDB 5210:** “Graduate Core Course” – Spring Semester 2010

**MCDB 5250:** Methods & Logic. 3 credit course. 21 Students. Spring Semester.

IMOD practical course of the NCRR Boulder 3-D Lab at MCDB (March 22<sup>nd</sup> – 25<sup>th</sup>).

**MCDB 4105:** (Structural Methods for Biological Macromolecules). Fall Semester.

**2009:**

**MCDB 5210:** “Graduate Core Course” – Spring Semester.

**2008:**

**MCDB 5210:** “Graduate Core Course” – Spring Semester.

IMOD practical course of the NCRR Boulder 3-D Lab at MCDB (July 9<sup>th</sup> – 12<sup>th</sup> 2008).

**MCDB 4105:** (Structural Methods for Biological Macromolecules). Fall Semester.

**2007:**

IMOD practical course of the NCRR Boulder 3-D Lab at MCDB (July 12<sup>th</sup> – 15<sup>th</sup> 2007).

**MCDB 5250:** Methods & Logic. 3 credit course. 21 Students. Spring Semester.

**MCDB 5210:** “Graduate Core Course” – Spring Semester.

**2006** (officially exempt from teaching during the first year of service):

**PREVIOUS TEACHING ACTIVITIES (EMBL, TSRI, ETH-ZUERICH, UNIV. OF BASEL):**

- 1989-1993: Instructor at the microscopy block courses (3 weeks per year) of the Biocenter, University of Basel, Switzerland. Teaching practical and theoretical aspects of advanced light and electron microscopy and digital image processing.
- 1993- 1997: Instructor in the Scripps graduate program, teaching similar topics as described above.
- 1998 - 2006: Teacher at the graduate student program of EMBL-Heidelberg, Germany
- 1998 - 2006: Multiple Invited lectures on molecular motors and microtubules at the Biocenter, University of Basel, Basel, Switzerland and the ETH-Zuerich-Hoenggerberg, Zuerich, Switzerland.
- 1998 - 2006: Principal applicant and organizer of the Cryo-Electron Microscopy EMBO courses in 2000, 2002 and 2004 at the EMBL-Heidelberg, Heidelberg, Germany. Co-organizer for this course in 2006.
- November  
2003: Participant teacher at the Cryo-EM course of the Scripps Res. Institute

**TALKS AND LECTURES AT NATIONAL AND INTERNATIONAL EVENTS (SINCE 2006):**

**2013:**

- Jan. 21-24<sup>th</sup>: Participant teacher at the Structural Biology block course (the Gulbenkian Institute of Science, Lisbon Portugal).
- Jan. 23<sup>rd</sup>: Institute Seminar at the Gulbenkian Institute of Science, Lisbon Portugal.
- March 18<sup>th</sup>: Presentation at the P41 Directors Meeting in Rockville MD.
- May 22<sup>nd</sup>: Presentation at the annual Colorado Front Range Meeting, Laramie, Wy.
- May 28<sup>th</sup>: Invited Speaker to the bi-annual meeting on "Emerging Concepts on Neuronal Cytoskeleton", Maitencillo, Chile.
- June 24-28<sup>th</sup>: Participant at the Gordon Research Conference on 3D Electron Microscopy, New London, NH.
- July 3<sup>rd</sup>: Lecture on molecular and cellular 3-D electron microscopy and tomography, Univ. of Athens, Greece.
- July 8-10<sup>th</sup>: Presentation at the annual HFSP Meeting (Strasbourg, France).
- Oct. 11<sup>th</sup>: Speaker at the bi-annual MCDB retreat, Vail CO.
- Dec. 14-18<sup>th</sup>: Participant at the annual meeting of the American Society of Cell Biology, New Orleans, LA.

**2012:**

- January 27<sup>th</sup>: Keynote lecture at the Karolinska IMOD workshop, Stockholm, Sweden.
- May 10<sup>th</sup>: Seminar at the University of Texas Medical branch, Galveston TX.
- May 26<sup>th</sup>: Research Talk and organizer at the Front Range Cytoskeleton Meeting, UCHSC, Aurora, CO.
- May 21<sup>st</sup>: Lecture on molecular and cellular 3-D electron microscopy and tomography at the Univ. of Athens, Greece.
- Sept. 16<sup>th</sup>: Research Seminar, Cancer UK, London, UK.
- Sept. 20<sup>th</sup>: Research Talk at the European Microscopy Conference, Manchester, UK.
- Sept. 26<sup>th</sup>: Participant teacher at the EMBO course on Cryo-EM and 3-D analysis

**2011:**

- Feb. 9<sup>th</sup>: Research Seminar, Imperial College, Harefield Heart Science Center, UK
- April 5<sup>th</sup>: Research Seminar, Case Western Reserve Univ. Cleveland OH
- May 5<sup>th</sup>: Talk at the Tomography Conference, EMBL-Heidelberg, Germany
- May 12<sup>th</sup>: Research Seminar at the Univ. of Winnipeg, Canada
- May 26<sup>th</sup>: Talk at the Colorado Microtubule Meeting, Boulder, CO
- June 6<sup>th</sup>: Presentation on the annual HFSP Meeting, Montreal Canada
- June 10<sup>th</sup>: 3-credit course lecture on molecular and cellular 3-D electron microscopy and tomography at the Univ. of Athens, Greece
- August 7<sup>th</sup>: Full-day theoretical course (X16: Tomography) at the MA meeting, Nashville TN
- August 17<sup>th</sup>: Research Seminar at the Univ. of Helsinki, Finland
- August 18<sup>th</sup>: Research Seminar at the Biocity Meeting, Åbo Univ., Turku, Finland
- October 2<sup>nd</sup>: MCDB Department Chalk Talk
- October 9<sup>th</sup>: Research talk at the biannual MCDB Retreat, Breckenridge, CO
- Dec. 2<sup>nd</sup>: Research talk at the ASCB subgroup meeting "Intermediate Filaments"

**2010:**

- March 29<sup>th</sup>: Seminar at the PETRA accelerator ring inauguration symposium at the DESY Hamburg, Germany
- April 20<sup>th</sup>: Invited Seminar at Stanford Univ. (CCNE Series)
- May 31<sup>st</sup>: Lecture at the Univ. of Athens, Greece
- June 3<sup>rd</sup>: Session Chair and Speaker at the Microtubule workshop in Heidelberg, Germany
- June 8<sup>th</sup>/12<sup>th</sup>: Teacher with multiple tasks (lecture, discussion groups etc.) at the School of Crystallography in Erice, Sicily, Italy
- August 4<sup>th</sup>: Invited speaker at the MSA meeting in Portland OR.
- October 14<sup>th</sup>: Seminar at the Univ. of Michigan, Ann Arbor
- Nov. 2<sup>nd</sup>: Seminar at Case Western Reserve Univ. Cleveland, OH
- Dec. 15<sup>th</sup>: Seminar at the Albert Einstein College, Bronx New York, NY

**2009:**

- April 6<sup>th</sup>: Seminar at the Univ. of Texas, Austin
- June 2<sup>nd</sup>: Lecture at the University of Athens
- June 8<sup>th</sup>: Lecture at the Max Plank Unit for Structural Biology, Hamburg, Germany
- June 15<sup>th</sup>: Chair of the GRC on 3-D electron microscopy (Colby-Sawyer College)
- Sept. 10<sup>th</sup>: Lecture at the Alpbach Workshop for coiled-coil Structures
- October 2<sup>nd</sup>: Lecture at the CNSI Workshop at UCLA

- October 12<sup>th</sup>: NCRR Directors Meeting in Bethesda MD
- October 16<sup>th</sup>: Presentation at the MCDB Department Retreat in Breckenridge, CO.
- Nov. 2<sup>nd</sup>: MCDB Department Chalk Talk
- Nov. 6<sup>th</sup>: Poster presentation at the Butcher Symposium, Broomfield CO.
- Nov. 8 - 11<sup>th</sup>: Lecture and practical advisor at the Scripps Workshop for Cryo-Electron Microscopy
- Dec. 5 - 9<sup>th</sup>: Presentation at the ASCB annual meeting in San Diego, CA.

**2008:**

- January 9<sup>th</sup>: Invited talk at the Keystone Symposia, Frontiers in Structural Biology, Steamboat, CO, USA.
- March 4<sup>th</sup>: University of Oxford, U.K. Invited seminar
- June 11<sup>th</sup>: Lecture at the University of Athens
- June 15<sup>th</sup>: GRC on 3-D electron microscopy (Il Giocco, It). Lecture and workshop
- June 20<sup>th</sup>: Seminar at the Ludwig Institute, Berlin Germany
- June 23<sup>rd</sup>: Lecture at the European Cytoskeletal Forum in Potsdam, Germany.
- June 25<sup>th</sup>: Lecture at the Cancer Conference of the CNIO, Madrid, Spain
- August 4<sup>th</sup>: Session Chair at the annual meeting of the Micr. Society of America. Albuquerque, NM
- August 21<sup>st</sup>: Seminar at the Univ. of Mississippi Medical Center, Jackson MS.
- Sept. 22<sup>nd</sup>: Workshop presentation at the HHMI Janelia Farm Laboratory, Chevy Chase VA.
- Sept. 27<sup>th</sup>: Lecture for the COSI training grant students, Univ. of Colorado at Boulder
- Nov. 12<sup>th</sup>: NCRR Directors Meeting in Bethesda, MD (Poster Presentation)
- Dec. 13<sup>th</sup>: Invited talk at the annual meeting of the American Society for Cell Biology, San Francisco, CA.

**2007:**

- Jan. 10<sup>th</sup>: Invited seminar at the Univ. of Colorado Health Science Center in Denver, CO.
- Feb. 1<sup>st</sup>: Invited seminar at the Univ. of Washington, Seattle WA.
- March 8<sup>th</sup>: Invited seminar at the Engineering Dept. CU-Boulder: Microscopy interest group.
- March 16<sup>th</sup>: Invited lecture at the German Cancer Society meeting in Frankfurt, Germany.
- May 8/9<sup>th</sup>: Lecture at the Annual users meeting of the Argonne NL, Chicago IL, USA.
- May 22<sup>nd</sup>: Invited lecture at the Univ. of Athens (Greece)
- June 24-29<sup>th</sup>: Presentation at the GRC on 3-D electron microscopy, Colby Sawyer Coll. New London, NH, USA
- August 8<sup>th</sup>: Invited lecture at the annual meeting of Microscopy Society of America, Ft. Lauderdale FL, USA.
- October 8<sup>th</sup>: NKI in Amsterdam, NL. Invited seminar.
- October 13<sup>th</sup>: Lecture at the MCDB retreat (Breckenridge, CO)
- October 29<sup>th</sup>: NIH/NIAMS Bethesda, MD, USA. Invited seminar
- Nov. 8<sup>th</sup>: Lecture in the CU Physics Dept., Boulder CO, USA on microtubule-MAP structure function relationships.
- Dec. 2<sup>nd</sup>: Annual meeting of the ASCB, Washington D.C. USA: Poster presentation

**2006:**

- March 15<sup>th</sup>: Session Chair and presenter at the Granlibakken meeting for "Hybrid Methods", Tahoe City, CA.
- Aug. 2<sup>nd</sup>: Oral presentation at the GRC on intermediate filaments, Salve Regina, Newport RI.



June 13<sup>th</sup>: Invited seminar at the ETH-Zuerich Hoenggerberg.  
Aug. 12<sup>th</sup>/22<sup>nd</sup>: Teacher and Co-organizer at the EMBO Course on "Cryo-electron microscopy and digital image analysis", EMBL-Heidelberg, Germany.  
Nov. 5<sup>th</sup>: Lecture at the Biophysical Colloquium, Christol Chemistry CU Boulder., 2006.

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**PEER REVIEWED PUBLICATIONS: (90 as of August, 2014)**

- Goulbourne CN, Gin P, Tatar A, Nobumori C, **Hoenger A**, Jiang H, Grovenor CR, Adeyo O, Esko JD, Goldberg IJ, Reue K, Tontono P, Bensadoun A, Beigneux AP, Young SG, Fong LG. (2014) The GPIHBP1-LPL Complex Is Responsible for the Margination of Triglyceride-Rich Lipoproteins in Capillaries. *Cell Metab.* 2014 Apr 8. pii: S1550-4131
- Maurer SP, Fourniol FJ, **Hoenger A**, Surrey T. (2014) Seeded microtubule growth for cryoelectron microscopy of end-binding proteins. *Methods Mol Biol.* 1136:247-60.
- Höög JL, Lacomble S, O'Toole ET, **Hoenger A**, McIntosh JR, Gull K. (2014) Modes of flagellar assembly in *Chlamydomonas reinhardtii* and *Trypanosoma brucei*. *Elife.* 2014;3:e01479.
- Hoenger, A.** (2014) High-resolution cryo-electron microscopy on macromolecular complexes and cell organelles. *Protoplasma*, 251:417-427.
- Gonzalez, MA, Cope, J, Rank, KC, Chen, JY, Tittmann, P, Rayment, I, Gilbert SP, **Hoenger, A.** (2013). Common Mechanistic Themes for the Powerstroke of Kinesin-14 motors. *J. Struct Biol.* 184:335-344.
- Iconomidou, V.A., Leontis, A., **Hoenger, A.**, Hamodrakas, S.J. (2013) Identification of a novel 'aggregation-prone' / 'amyloidogenic determinant' peptide in the sequence of the highly amyloidogenic human Calcitonin. *FEBS-Letters*, S0014-5793:00062-8.
- Cope J, Rank KC, Gilbert SP, Rayment I, **Hoenger A.** (2013) Kar3Vik1 Uses a Minus-End Directed Powerstroke for Movement Along Microtubules. *PLOS-one* 8:e53792.
- Schwartz CL, Heumann JM, Dawson SC, **Hoenger A.** (2012) A detailed, hierarchical study of *Giardia lamblia*'s ventral disc reveals novel microtubule-associated protein complexes. *PLoS One.* 7:e43783.
- Rank KC, Chen CJ, Cope J, Porche K, **Hoenger A**, Gilbert SP, Rayment I. (2012) Kar3Vik1, a member of the Kinesin-14 superfamily, shows a novel kinesin microtubule binding pattern. *J Cell Biol.* 197:957-70.
- Erickson K.D., Bouchet-Marquis C., Heiser K., Szomolanyi-Tsuda E., Mishra R., Lamothe B., **Hoenger A.**, and Garcea, R.L. (2012) Nuclear Virus Factories in Polyomavirus-Infected Cells. *PLOS Pathogens*, Apr;8(4):e1002630.
- Höög, J.L., Bouchet-Marquis, C., McIntosh, J.R., **Hoenger, A.**, and Gull, K. (2012). Cryo-Electron Tomography and 3-D Analysis of the Intact Flagellum in *Trypanosoma brucei*. *J. Struct. Biol.* 178:189-98.
- Iconomidou VA, Cordopatis P, **Hoenger A**, Hamodrakas SJ. (2012) The silkworm eggshell as a natural amyloid shield for the safe development of insect oocyte and embryo: Insights from

studies of silkworm chorion protein peptide-analogues of the B famil. *Biopolymers*. 96:723-33.

Bouchet-Marquis C, Pagratis M, Kirmse R, **Hoenger A**. (2012) Metallothionein as a clonable high-density marker for cryo-electron microscopy *J Struct Biol*. 177:119-27.

Iconomidou VA, Pheida D, Hamodraka ES, Antony C, **Hoenger A**, Hamodrakas SJ. (2012) An amyloidogenic determinant in n-terminal pro-brain natriuretic peptide (nt-probnp): Implications for cardiac amyloidoses. *Biopolymers*. 98:67-75.

Bouchet-Marquis C, & **Hoenger A**. (2011) Cryo-electron tomography on vitrified sections: a critical analysis of benefits and limitations for structural cell biology. *Micron*. 42:152-62.

Cope BJ, Heumann J, **Hoenger A**. (2011) Cryo-electron tomography for structural characterization of macromolecular complexes. *Curr Protoc Protein Sci*. 2011 Aug;Chapter 17:Unit17.13.

Iconomidou VA, Pheida D, Hamodraka ES, Antony C, **Hoenger A**, Hamodrakas SJ. (2011) An amyloidogenic determinant in N-terminal pro-brain natriuretic peptide (NT-proBNP): Implications for cardiac amyloidoses. *Biopolymers*. Jul 25. doi: 10.1002/bip.21698.

Heumann JM, **Hoenger A**, Mastronarde DN. (2011) Clustering and variance maps for cryo-electron tomography using wedge-masked differences. *J Struct Biol*. 2011 Sep;175(3):288-99.

West M, Zurek N, **Hoenger A**, Voeltz GK. (2011) A 3D analysis of yeast ER structure reveals how ER domains are organized by membrane curvature. *J Cell Biol*. 193:333-46. PMID: 21502358.

**Hoenger A**, & Bouchet-Marquis C. (2011) Cellular tomography. *Adv Protein Chem Struct Biol*. 82:67-90. PMID: 21501819

Maurer SP, Bieling P, Cope J, **Hoenger A**, Surrey T. (2011) GTP{gamma}S microtubules mimic the growing microtubule end structure recognized by end-binding proteins (EBs). *Proc Natl Acad Sci U S A*. 108:3988-93. PMID: 21368119

De Carlo S, Lin SC, Taatjes DJ, **Hoenger A**. (2011) Molecular basis of transcription initiation in Archaea. *Transcription*. 1:103-111. PMID: 21326901

Kirmse R, Bouchet-Marquis C, Page C, **Hoenger A**. (2010) Three-dimensional cryo-electron microscopy on intermediate filaments. *Methods Cell Biol*. 96:565-89. PMID: 20869538

Kirmse R, Qin Z, Weinert CM, **Hoenger A**, Buehler MJ, Kreplak L. (2010) Plasticity of intermediate filament subunits. *PLoS One*. 5:e12115. PMID: 20814582

Cope J, Gilbert S, Rayment I, Mastronarde D, **Hoenger A**. (2010) Cryo-electron tomography of microtubule-kinesin motor complexes. *J Struct Biol*. 170:257-65. Epub 2009 Dec 16. PMID: 20025975

Xiong Q, Mophew MK, Schwartz CL, **Hoenger A**, Mastronarde DN. (2009) CTF determination and correction for low dose tomographic tilt series. *J Struct Biol*. 168:378-87. PMID: 19732834

McIntosh JR, Mophew MK, Grissom PM, Gilbert SP, **Hoenger A**. (2009) Lattice Structure of Cytoplasmic Microtubules in a Cultured Mammalian Cell. *J Mol Biol*. 394:177-82. PMID: 19769986

- Marx A, **Hoenger A**, Mandelkow E. (2009) Structures of kinesin motor proteins. *Cell Motil Cytoskeleton*. 66:958-66. PMID: 19530174
- Iribe G, Ward CW, Camelliti P, Bollensdorff C, Mason F, Burton RA, Garry A, Morpew MK, **Hoenger A**, Lederer WJ, Kohl P. (2009) Axial stretch of rat single ventricular cardiomyocytes causes an acute and transient increase in Ca<sup>2+</sup> spark rate. *Circ Res*. 104:787-95.
- Hoenger A**, McIntosh JR. (2009) Probing the macromolecular organization of cells by electron tomography. *Curr Opin Cell Biol*. 21:89-96.
- Small JV, Auinger S, Nemethova M, Koestler S, Goldie KN, **Hoenger A**, Resch GP. (2008) Unravelling the structure of the lamellipodium. *J Microsc*. 231:479-85.
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