

CURRICULUM VITAE

HOENGER Andreas Ph. D.

born: 24.11.1962, Basel, Switzerland

Present Address:

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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.
- 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 1994: Research fellowship from the University of Basel Committee of the **Swiss National Science Foundation**, Basel, Switzerland.

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- 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 July 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).
- Aug. 2009 – April 2015: **NIH-NCRR**: 2P41RR000592-39 - 43: (after dissolution of NCRR: P41GM103431) P-41 Center grant for the Boulder Laboratory for 3 Microscopy of Cells. My role: PI. (\$1,074,520 p/a)
- Sept 2010 - 2013: **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)
- Since October 2015: **NIH-NIGMS**: 1R01GM113950-01: Structure and Function of Heterodimeric Kinesin-2 Motor Head Domains My role: PI. (\$303,410 p/a).
- Since August 2020: **NIH-NIGMS**: 1U24 GM139174: CU Boulder Center for Cryo-Electron Tomography (CU Boulder CCET), My role: PI. (\$2.5M for upfront equipment, \$700K annually).

Pending: **NIH-NIGMS:** 1R01GM113950-02: Structure and Function of Heterodimeric Kinesin-2 Motor Head Domains My role: PI.

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)**”
- Since 2016: Member of the “**Biophysical Society of the USA**”

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).

IMPORTANT SCIENTIFIC COLLABORATIONS:

Due to the nature of the NCCR facility I am directing in Boulder we have a large number of collaborations with 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)).

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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.

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

2020:

MCDB 3501: "Structural Methods for Biological Macromolecules". Fall Semester.

2019:

MCDB-4001-003: "The molecular biology of assemblies and machines" Spring Semester

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MCDB 3501: “Structural Methods for Biological Macromolecules”. Fall Semester.

2018:

MCDB 5210: “Graduate Core Course”, Fall Semester.

MCDB 3501: “Structural Methods for Biological Macromolecules”. Fall Semester.

MCDB 3333: Guest lecture (MCDB-3333) and practical demo on electron microscopes

2017:

MCDB 5210: “Graduate Core Course”, Fall Semester.

MCDB 3501: “Structural Methods for Biological Macromolecules”. Fall Semester.

MCDB 3333: Guest lecture and practical demo on electron microscopes

2016 (Sabbatical leave from January to August 2016):

MCDB 5210: “Graduate Core Course”, Fall Semester.

MCDB 3501: “Structural Methods for Biological Macromolecules”. Fall Semester.

(cancelled due to illness)

2015:

MCDB 5250: “Methods & Logic” Spring Semester

MCDB 5210: “Graduate Core Course”, Fall Semester.

2014:

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

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

MCDB 3501: “Structural Methods for Biological Macromolecules”. Fall Semester.

2013:

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

MCDB 4501: “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 4501: “Structural Methods for Biological Macromolecules”. Fall Semester.

2011:

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MCDB 5210 “Graduate Core Course” – Spring Semester.

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

MCDB 4501: (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 22nd – 25th).

MCDB 4501: (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 9th – 12th 2008).

MCDB 4501: (Structural Methods for Biological Macromolecules). Fall Semester.

2007:

IMOD practical course of the NCRR Boulder 3-D Lab at MCDB (July 12th – 15th 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):

MCDB 5210: “Graduate Core Course” – Spring Semester 2006

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.

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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 ARRIVING IN COLORADO IN 2006):

2019:

March 27th: Lecture, cryo-EM subgroup meeting.

May 8th – 10th: Invited Seminar, McGill University, Dept. of Cell Biol. And Anatomy

May 29th - 30th: Lecture on molecular and cellular 3-D electron microscopy and tomography, Univ. of Athens, Greece.

Sept. 11th – 13th: Lecture at the MCDB department retreat.

Nov. 20th: Lecture, cryo-EM subgroup meeting.

2018:

March 13th: Invited research seminar and lecture to students at the University of Cape Town South Africa.

April 18th: Invited research seminar at the University of Manitoba, Winnipeg, Canada.

June 13th: Invited speaker at the Front Range Microtubule Meeting in Laramie WY.

Sept. 16-19th: Principal organizer of the 8th International Conference on Electron Tomography, Les Diablerets, Switzerland.

2017:

June 8th - 9th: Lecture on molecular and cellular 3-D electron microscopy and tomography, Univ. of Athens, Greece.

Nov. 3rd – 5th: “EMBL in the USA” Conference: Scientific overview talk

2016 (Sabbatical leave from January to August 2016):

Jan. 11-14th: Invited teacher at a Workshop on the Resolution Revolution in 3D Cryo-EM, The Weizmann Institute, Rehovot, Israel.

Feb. 26th: Scientific Seminar at the University of Zuerich, Switzerland.

May 2nd – 4th: Consulting for Dr. Linda Sandblad (Univ. of Umeå, SE) for a EM purchase in Eindhoven, the Netherlands.

June 6th - 7th: Lecture on molecular and cellular 3-D electron microscopy and tomography, Univ. of Athens, Greece.

2015:

- Feb. 8-10th: Consulting and informal research seminar, Univ. of Umeå, Sweden.
Feb. 11th: Research Seminar at the German Center for Neurodegenerative Diseases (DZNE), Bonn Germany.
Feb. 24th: Informal research seminar, Rensselaer Polytech. Institute, Troy, NY.
May 7th: Lecture on molecular and cellular 3-D electron microscopy and tomography, Univ. of Athens, Greece.
May 29th: Scientific Talk at the annual Front Range Meeting, Boulder CO.
June 2nd: Workshop lecture at Yale Univ. New Haven CT.
June 4th: Scientific Seminar at Yale Univ. New Haven CT.

2014:

- March 13th: Presentation at the Hybrid-Meeting, Granlibakken, Tahoe City, USA
May 26th: Lecture on molecular and cellular 3-D electron microscopy and tomography, Univ. of Athens, Greece.
May 30th: Research Talk at the bi-annual Microtubule Meeting, Heidelberg, Germany.
June 24th: Research Talk at the 3-D EM Gordon Conference, Gerona, Spain.
Nov. 17th: Research Talk at the 5th Tomography Meeting (Nov. 17-20th), Cancun, Mexico.
Dec. 18th: Research Seminar, McGill Univ. Dept. of Anatomy and Cellbiology

2013:

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

2012:

- January 27th: Keynote lecture at the Karolinska IMOD workshop, Stockholm, Sweden.
May 10th: Seminar at the University of Texas Medical branch, Galveston TX.
May 26th: Research Talk and organizer at the Front Range Cytoskeleton Meeting, UCHSC, Aurora, CO.
May 21st: Lecture on molecular and cellular 3-D electron microscopy and tomography at the Univ. of Athens, Greece.
Sept. 16th: Research Seminar, Cancer UK, London, UK.

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- Sept. 20th: Research Talk at the European Microscopy Conference, Manchester, UK.
Sept. 26th: Participant teacher at the EMBO course on Cryo-EM and 3-D analysis

2011:

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

2010:

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

2009:

- April 6th: Seminar at the Univ. of Texas, Austin
June 2nd: Lecture at the University of Athens
June 8th: Lecture at the Max Plank Unit for Structural Biology, Hamburg, Germany
June 15th: Chair of the GRC on 3-D electron microscopy (Colby-Sawyer College)
Sept. 10th: Lecture at the Alpbach Workshop for coiled-coil Structures
October 2nd: Lecture at the CNSI Workshop at UCLA
October 12th: NCRR Directors Meeting in Bethesda MD
October 16th: Presentation at the MCDB Department Retreat in Breckenridge, CO.
Nov. 2nd: MCDB Department Chalk Talk
Nov. 6th: Poster presentation at the Butcher Symposium, Broomfield CO.
Nov. 8 - 11th: Lecture and practical advisor at the Scripps Workshop for Cryo-Electron Microscopy
Dec. 5 - 9th: Presentation at the ASCB annual meeting in San Diego, CA.

2008:

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

2007:

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

2006:

- March 15th: Session Chair and presenter at the Granlibakken meeting for "Hybrid Methods", Tahoe City, CA.
- Aug. 2nd: Oral presentation at the GRC on intermediate filaments, Salve Regina, Newport RI.
- June 13th: Invited seminar at the ETH-Zuerich Hoenggerberg.
- Aug. 12th/22nd: Teacher and Co-organizer at the EMBO Course on "Cryo-electron microscopy and digital image analysis", EMBL-Heidelberg, Germany.
- Nov. 5th: Lecture at the Biophysical Colloquium, Christol Chemistry CU Boulder., 2006.

PEER REVIEWED PUBLICATIONS:

See also: <http://orcid.org/0000-0001-9176-6658>

- Rog-Zielinska EA, Scardigli M, Peyronnet R, Zgierski-Johnston CM, Greiner J, Madl J, O'Toole ET, Morphew MK, **Hoenger A**, Sacconi L, Kohl P. (2020). Beat-By-Beat Cardiomyocyte T-Tubule Deformation Drives Tubular Content Exchange. *Circ Res*, Nov 24. doi: 10.1161/CIRCRESAHA.120.317266.
- Heimlicher MB, Bächler M, Liu M, Ibeneche-Nnewiwe C, Florin EL, **Hoenger A**, Brunner D. (2019) Reversible solidification of fission yeast cytoplasm after prolonged nutrient starvation. *J Cell Sci*. 132(21). pii: jcs231688.
- Liu, M., Heimlicher M. B., Bächler, M., Ibeneche-Nnewiwe, C. C., Florin, E. L. Brunner, D., & **Hoenger, A.** (2019) Glucose Starvation triggers filamentous Septin Assemblies in an *S. pombe* Septin 2 deletion Mutant. *Biology Open*, 8(1). pii: bio037622.
- Rog-Zielinska EA, O'Toole ET, **Hoenger A**, Kohl P. (2019) Mitochondrial Deformation During the Cardiac Mechanical Cycle. *Anat Rec (Hoboken)*; doi: 10.1002/ar.23917.
- Burton RAB, Rog-Zielinska EA, Corbett AD, Peyronnet R, Bodi I, Fink M, Sheldon J, **Hoenger A**, Calaghan SC, Bub G, Kohl P. (2017) Caveolae in Rabbit Ventricular Myocytes: Distribution and Dynamic Diminution after Cell Isolation. *Biophys J*. 113:1047-1059.
- Rog-Zielinska EA, Johnston CM, O'Toole ET, Morphew M, **Hoenger A**, Kohl P. (2016) Electron tomography of rabbit cardiomyocyte three-dimensional ultrastructure. *Prog Biophys Mol Biol*. 121:77-84.
- Rao AN, Falnikar A, O'Toole ET, Morphew MK, **Hoenger A**, Davidson MW, Yuan X, Baas PW. (2016) Sliding of centrosome-unattached microtubules defines key features of neuronal phenotype. *J Cell Biol*. 213:329-41.
- Rog-Zielinska EA, Johnston CM, O'Toole ET, Morphew M, **Hoenger A**, Kohl P. (2016) Electron tomography of rabbit cardiomyocyte three-dimensional ultrastructure. *Prog Biophys Mol Biol*. 2016 May 19. pii: S0079-6107(16)30037-2.
- Brown JR, Schwartz CL, Heumann JM, Dawson SC, **Hoenger A**. (2016) A Detailed Look at the Cytoskeletal Architecture of the Giardia lamblia Ventral Disc. *J Struct Biol*. pii: S1047-8477(16)30010-7.
- Höög JL, Lacomble S, Bouchet-Marquis C, Briggs L, Park K, **Hoenger A**, Gull K. (2016) 3D Architecture of the Trypanosoma brucei Flagella Connector, a Mobile Transmembrane Junction. *PLoS Negl Trop Dis*. 10:e0004312.
- Morphew MK, O'Toole ET, Page CL, Pagratis M, Meehl J, Giddings T, Gardner JM, Ackerson C, Jaspersen SL, Winey M, **Hoenger A**, McIntosh JR. (2015) Metallothionein as a clonable tag for protein localization by electron microscopy of cells. *J Microsc*. doi: 10.1111/jmi.12262.
- Goulbourne CN, Gin P, Tatar A, Nobumori C, **Hoenger A**, Jiang H, Grovenor CR, Adeyo O, Esko JD, Goldberg IJ, Reue K, Tontonoz 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

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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.

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