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Positions | Academic Career

2001-present	Full Professor / Director, Institute of Biochemistry, Goethe University Frankfurt
1998-2001	Full Professor / Director, Physiological Chemistry, Medical Faculty, University Marburg
1996-1998	Assistant Professor in Biochemistry / Biophysics, Technical University (TU) Munich
1996	Habilitation in Biochemistry, TU Munich
1992-1998	Max Planck Research Group Leader, MPI of Biochemistry, Martinsried
1992-1998	Independent Research Group Leader, Department of Biophysics, TU Munich
1990-1991	Max Kade Fellowship, Stanford University (with Harden M. McConnell), USA
1987-1989	PhD in Biochemistry with highest honors (<i>summa cum laude</i>), TU Darmstadt
1981-1987	Diploma in Chemistry with highest honors (<i>summa cum laude</i>), TU Darmstadt

Scientific Awards | Honors (selection)

2024-	2 nd ERC Advanced Grant, ERC Investigator, Life Sciences, European Research Council
2023-2024	Schaefer Research Award and Visiting Professor, Columbia University, New York, USA
2019	Director, Inst. Struct. Mol. Biol. (ISMB) and Head of Joint Research Departments, University College London (UCL) and Birkbeck College London (gratefully declined)
2019	Elected EMBO Member, Structural Biology, Membrane/Transport, Immunology, etc.
2018	Reinhart Koselleck Award Grant, German Research Foundation (DFG)
2018	ERC Investigator, Advanced Grant, Life Sciences, European Research Council
2017-present	Appointed Honorary Visiting Fellow, Merton College, University of Oxford, UK
2017-2018	Visiting Professor, Department of Biochemistry, University of Oxford, UK
2010-present	Excellence in Teaching Award (3x), Goethe University Frankfurt
2010-2021	Honorary Professorship, iCeMS, Kyoto University, Japan
2009-2010	Adjunct & Visiting Professor, University of California San Francisco (UCSF), USA
1996-1998	Heisenberg Fellow, German Research Foundation (DFG), Germany
1989-1991	Postdoctoral Fellowship of DFG and Max Kade Foundation, New York, USA
1987-1989	PhD Fellowship, awarded by the Chemical Industry (FCI), Germany
1985	Anton Keller Prize in Chemistry, Germany
1984-1987	Fellow, Studienstiftung des Deutschen Volkes, Germany
1983-1987	Fellow, Cusanuswerk, Germany

Academic Leadership (selection)

2022-present	Head of Collaborative Research Center CRC 1507 <i>Membrane Assemblies & Machineries</i>
2008-2020	Head of Collaborative Research Center CRC 807 <i>Membrane Transport</i>
2007-2019	Cofounder, Board of Directors, Cluster of Excellence Frankfurt (EXC 115)
2007-2010	Spokesperson, Biomembranes, German Society Biochemistry and Molecular Biology
2005-2010	Head of the European Membrane Biology Network (EMBN-Train)
2003-2007	Head of Collaborative Research Center CRC 628 <i>Membrane Proteomics</i>
2001-2016	Founder and Member of Board of Directors, Center for Membrane Proteomics (CMP)

Trusts | Editorial Boards (selection)

2020-present	Board Member, EMBO Fellowship Committee
2016-2023	Chair and panel member, ERC Advanced Grants, European Research Council (ERC)
2015-2016	Chair, Centre National de la Recherche Scientifique (CNRS), France
2014-present	Trustee, German Research Foundation (DFG), Goethe University Frankfurt
2010-present	Chair and Trustee, Paul-Ehrlich Early Career Award, Paul Ehrlich Foundation
2008-2011	Review Board Member, Basic Research in Biology and Medicine (FK 201), DFG
2009	Review Board Member, Excellence Initiative, Germany
2003-2008	Editorial Board, <i>The Journal of Biological Chemistry</i> (ASBMB)

Keynote Lectures | Organization of International Meetings (selection)

2025/2023	Chair / Vice Chair, Gordon Research Conference, Membrane Transport, USA
2024	APEX Lecture , Vanderbilt University, Nashville, TN, USA
2024	William E. Mahoney Lecture , University of Massachusetts, Amherst, MA, USA
2023	Carl F. Schmidt Lecture , University of Pennsylvania, Philadelphia, USA
2023	Philip Bard Lectureship , Johns Hopkins School of Medicine, Baltimore, USA
2022	Kavli Lecture, University of Oxford, UK
2022	Arnold D. Welch Lectureship , Yale University, New Haven, USA
2022	EMBO Keynote Lecture, Lorne Conference, Melbourne, Australia
2021	Keynote Opening Lecture, ISBUC Copenhagen, Denmark
2019	Keynote Lecture, NWO CHAINS, The Dutch Chemistry Society, NL
2019	Baruch S. Blumberg Lecture (Nobel Prize 1976), Science Museum, Oxford, UK
2019	Keynote Lecture, Texas Center Membrane Protein Research Symposium, USA
2019	Keynote Lecture, FEBS International Conference, Budapest, Hungary
2018	Keynote Lecture, FEBS International Conference, Innsbruck, Austria
2017	Keynote Lecture, Symposium SFB 35, Vienna, Austria
2017	Plenary Lecture and Session Chair, IUBAP & EBSA Congress, Edinburgh, UK
2012	Chair, FASEB, Mechanism & Diseases of Transport ATPases, Aspen, USA
2011	Organizer, Internal Molecular Life Science Conference, GBM, Frankfurt, Germany
2010-present	Organizer, International FEBS Conference, ABC Proteins, Innsbruck, Austria

Promoting of Researchers in Early Career Phases

Teaching, mentoring, and supervision activities: 20 group leaders, 26 Postdocs, 79 PhD students, >100 undergraduate students, >150 thesis advisory committees at MPI of Biochemistry Martinsried, TU Munich, Philipps University Marburg, and Goethe University Frankfurt. Initiator of the DFG Integrative Graduate School *Membrane Transport* (TRAM) in the CRC 807. Coordinator of the International European Membrane Biology Training Network (EMBNTrain). Member of the DFG Graduate School *Complex Light-triggered Reactions*, International Max Planck Research School for Heart and Lung Research (MPI-HLR), International Max Planck Research School, Structure and Function of Membranes (MPI-BP). Trustee and chair of the **Paul Ehrlich and Ludwig Darmstaedter Early Career Award**, one of the most prestigious prizes for young investigators in Germany.

Members of the Tampé lab holding faculty positions (selected): Maike Bublitz (Professor, University of Oxford, UK); Karin Busch (Professor, University of Münster, Germany); Min Chen (Professor, University of Massachusetts, USA); Roger Draheim (Assoc. Head of Research, University of Portsmouth, UK); Chris van der Does (Group Leader, University of Freiburg, Germany); Robert Ernst (Professor, Medical Faculty, University of Saarland); Alexander Gottschalk (Professor, Goethe University Frankfurt, Germany); Inga Hänel (Professor, Goethe University Frankfurt, Germany); Robin Klemm (Professor, University of Oxford, UK); Jacob Piehler (Professor, University of Osnabrück, Germany); Kristian Müller (Professor, Bielefeld University, Germany); Peter U. Mayerhofer (Lecturer, University of Surrey, UK); M. Florencia Sanchez (Emmy Noether Group Leader, University of Münster, Germany); Lutz Schmitt (Professor, University of Düsseldorf, Germany); Jilin Tang (Professor, Chinese Academy of Sciences, Changchun, China); Guido Veit (Principal Investigator, McGill University, Montréal, CN).

Short Bio

Robert Tampé is renowned for his groundbreaking research in membrane biology and cellular quality control. He serves as the director of the Institute of Biochemistry at Goethe University Frankfurt and head of the Collaborative Research Center 1507. Tampé's work has significantly advanced our understanding of membrane transport complexes, receptor organization, antigen processing, and viral immune evasion. He has also made notable discoveries in ribosome recycling mechanisms. Throughout his career, Tampé has been honored with prestigious awards, including two ERC Advanced Grants from the European Research Council, the Reinhart Koselleck Project Award from the German Research Foundation (DFG), and the Schaefer Research Award from Columbia University, New York. His contributions to science are further underscored by his membership in the European Molecular Biology Organization (EMBO) and his frequent invitations to deliver honorary lectures.

Major Scientific Achievements and Breakthroughs (2023-15):

- Dynamic interactome of the peptide loading complex in dendritic cells (2023 *PNAS*)
- Structure of a fully assembled tumor-specific T-cell receptor ligated by pMHC (2022 *Cell*)
- Mechanistic and structural basis of the MHC I multichaperone complexes (2022 *Nat Commun*) awarded as “Molecule of the Month” by the Protein Data Base (PDB) in 04/2023
- Ligand-independent signaling by receptor confinement (2021 *Science*)
- Structure of an archaeal ribosome quality control complex (2020 *EMBO J*)
- Full conformational landscape of an ABC transporter under turnover conditions (2019 *Nature*)
- Structure of the human MHC I peptide-loading complex (2017 *Nature*)
- First structure of an MHC I chaperone and editing complex (2017 *Science*)
- Structure of the post-splitting complex 40S-ABCE1 in ribosome recycling (2017 *NSMB*)
- First structure of a transport complex at subnanometer resolution by cryo-EM (2015 *Nature*)

Contributions to Science

1. Membrane Machineries in Antigen Processing and Recognition. The human immune system has developed intricate strategies for identifying and eliminating infected or cancerous cells. The Tampé laboratory has been a pioneer in integrative research, unraveling the cellular pathways and investigating the machinery that plays a crucial role in adaptive immunity (*PNAS*'23, *eLife*'23, *Cell*'22, *Annu Rev Biophys*'20, *Nature*'19, *Science*'17, *Nature*'17). Tampé contributed significantly to the analysis of macromolecular complexes that are essential for a properly functioning immune system. Main discoveries include details on the transporter associated with antigen processing (TAP), the chaperone machinery involved in MHC molecule biogenesis, and the fully-assembled liganded T-cell receptor complex responsible for triggering the final immune response at the immunological synapse (*Cell*'22, *Immunity*'94, *PNAS*'97, '01, '09). By a wide spectrum of approaches, key mechanistic determinants of the TAP complex were explored (*PNAS*'10, '11; *Nat Comm* '14, 2015; *JACS*'16). Tampé's team has explored essential mechanistic factors of the TAP complex and elucidated the mechanisms by which viruses target antigen processing machineries to evade immune detection (*Nature*'95; *EMBO*'96; *PNAS*'03, '05; *Nat Immunol*'05; *PLoS Pathog*'14). Notable accomplishments also include seminal work on MHC-I assembly pathways, leading to subsequent discoveries like the structure of the MHC peptide loading complex (PLC) and other multi-chaperone complexes within the endoplasmic reticulum (*Nature*'17; *Science*'17, *Cell*'14, *Science*'97).

- Barends M, Koller N, Schölz C, Durán V, Bošnjak B, Becker J, Döring M, Bles H, Förster R, Kalinke U, Tampé R (2023) Dynamic interactome of the MHC I peptide loading complex in human dendritic cells. *Proc Natl Acad Sci USA* 120, e2219790120. [doi:10.1073/pnas.2219790120](https://doi.org/10.1073/pnas.2219790120)
- Sušac L, Yuong MT, Thomas C, von Bülow S, O'Brien-Ball C, Santos AM, Fernandes RA, Hummer G, Tampé R*, Davis SJ* (2022) Structure of a fully assembled tumor-specific T-cell receptor ligated by pMHC. *Cell* 185, 3201-13. (*corr. author) [doi:10.1016/j.cell.2022.07.010](https://doi.org/10.1016/j.cell.2022.07.010)
- Domnick A, Winter C, Sušac L, Hennecke L, Hensen M, Zitzmann N, Trowitzsch S, Thomas C, Tampé R (2022) Molecular basis of MHC I quality control in the peptide loading complex. *Nat Commun* 13, 4701. [doi:10.1038/s41467-022-32384-z](https://doi.org/10.1038/s41467-022-32384-z)
- Müller IK, Winter C, Thomas C, Spaapen RM, Trowitzsch S, Tampé R (2022) Structure of an MHC I-tapasin-ERp57 editing complex defines chaperone promiscuity. *Nat Commun* 13, 5283. [doi:10.1038/s41467-022-32841-9](https://doi.org/10.1038/s41467-022-32841-9)
- Bles H, Janulienė D, Hofmann T, Koller N, Schmidt C, Trowitzsch S, Moeller A, Tampé R (2017) Structure of the human MHC-I peptide-loading complex. *Nature* 551, 525-8. [doi:10.1038/nature24627](https://doi.org/10.1038/nature24627)
- Thomas C, Tampé R (2017) Structure of the TAPBPR-MHC I complex defines the mechanism of peptide loading and editing. *Science* 358, 1060-4. [doi:10.1126/science.aao6001](https://doi.org/10.1126/science.aao6001)

2. Structure and Mechanism of ABC Transport Complexes. ATP-binding cassette (ABC) transporters represent one of the largest protein superfamilies found across all forms of life. They serve as molecular mechanisms, connecting ATP binding, hydrolysis, and phosphate release to the movement of a wide range of substances across cell membranes. ABC transporters undergo significant structural changes during substrate transport (*Annu Rev Biochem*'20). Tampé is at the forefront of pioneering innovative approaches for the structural and mechanistic analysis of ABC transporters (*Nature*'15; *Nat Chem*'15; *PNAS*'17). The conformational landscape of a TAP-related transport machinery has been captured by structural and

biochemical approaches (*Nature*'19, *eLife*'20, '21). The work provided a new perspective on the mechanistic principle of this medically important protein superfamily.

- a. Thomas C, Tampé R (2020) Structural and mechanistic principles of ABC transporters. *Annu Rev Biochem* 89, 605-36. [doi:10.1146/annurev-biochem-011520-105201](https://doi.org/10.1146/annurev-biochem-011520-105201)
- b. Hofmann S, Janulienė D, Mehdipour AR, Thomas C, Stefan E, Brüchert S, Kuhn BT, Geertsma ER, Hummer G, Tampé R*,# , Moeller A* (2019) Conformation space of a heterodimeric ABC exporter under turnover conditions. *Nature* 471, 580-3. (*corr. author, #lead contact) [doi:10.1038/s41586-019-1391-0](https://doi.org/10.1038/s41586-019-1391-0)
- c. Stefan E, Obexer R, Hofmann S, Vu Huu K, Huang Y, Morgner N, Suga H, Tampé R (2021) De-novo macrocyclic peptides dissect energy coupling of a heterodimeric ABC transporter by multimode allosteric inhibition. *eLife* 10, e67732. [doi:10.7554/eLife.67732](https://doi.org/10.7554/eLife.67732)
- d. Stefan E, Hofmann S, Tampé R (2020) A single power stroke by ATP binding drives substrate translocation in a heterodimeric ABC transporter. *eLife* 9, e55943. [doi:10.7554/eLife.55943](https://doi.org/10.7554/eLife.55943)
- e. Kim JM, Wu, S, Tomasiak T, Mergel C, Winter MN, Stiller S, Robles-Colmanares Y, Stroud RM*, Tampé R*, Craik CS*, Cheng Y* (2015) Subnanometre-resolution electron cryomicroscopy structure of a heterodimeric ABC exporter. *Nature* 517, 396-400. (*corr. author) [doi:10.1038/nature13872](https://doi.org/10.1038/nature13872)

3. Ribosome Recycling and Associated Quality Control. Ribosome recycling plays a pivotal role in mRNA translation. The Tampé lab was among the early pioneers in discovering the ribosome recycling factor ABCE1 (*PNAS*'11) and elucidating the mechanism of ribosome splitting (*TiBS*'12, *EMBO J*'20; *Cell Rep*'19; *NSMB*'17; *Nat Comm*'15). His lab championed the idea of a closed translational cycle connected by ribosome recycling from termination to initiation and provided new insights into the mechanistic principles underlying the process of ribosome-associated quality control.

- a. Nürenberg-Goloub E, Kratzat H, Heinemann H, Heuer A, Kötter P, Berninghausen O, Becker T, Tampé R*#, Beckmann R* (2020) Molecular analysis of the ribosome recycling factor ABCE1 bound to the 30S post-splitting complex. *EMBO J* 39, e103788. (*corr. author, #lead contact) [doi:10.15252/embj.2019103788](https://doi.org/10.15252/embj.2019103788)
- b. Gouridis G, Hetzert B, Kiosze-Becker K, de Boer M, Heinemann H, Nürenberg-Goloub E, Cordes T, Tampé R (2019) ABCE1 controls ribosome recycling by an asymmetric dynamic conformation equilibrium. *Cell Rep* 28, 723-634. [doi:10.1016/j.celrep.2019.06.052](https://doi.org/10.1016/j.celrep.2019.06.052)
- c. Heuer A, Gerovac M, Schmidt C, Trowitzsch S, Preis A, Kötter P, Berninghausen O, Becker T, Beckmann R, Tampé R (2017) Structure of the 40S-ABCE1 post-splitting complex in ribosome recycling and translation initiation. *Nat Struct Mol Biol* 24, 453-60. [doi:10.1038/nsmb.3396](https://doi.org/10.1038/nsmb.3396)
- d. Kiosze-Becker K, Ori A, Gerovac M, Heuer A, Nürenberg-Goloub E, Jan Rashid U, Becker T, Beckmann R, Beck M, Tampé R (2016) Structure of the ribosome post-recycling complex probed by chemical cross-linking and mass spectrometry. *Nat Commun* 7, 13248. [doi:10.1038/ncomms13248](https://doi.org/10.1038/ncomms13248)

4. Membrane Receptor Clustering and Transmembrane Signaling. Membrane organization and receptor clustering play a critical role in transmitting signals and controlling cellular responses. The Tampé lab has made groundbreaking discoveries using a unique array of light-controllable optical nanotools, revealing a form of receptor signaling that operates independently of ligands through the clustering of membrane receptors in situ (*Science*'21; *Nano Lett*'21; *TiBS*'22). These versatile techniques, combined with the nanotools employed, have opened up new possibilities for understanding the impact of membrane organization on cell signaling.

- a. Sánchez MF, Els-Heindl S, Beck-Sickinger AG, Wieneke R, Tampé R (2021) Photo-induced receptor confinement drives ligand-independent GPCR signaling. *Science* 371, abb7657. [doi:10.1126/science.abb7657](https://doi.org/10.1126/science.abb7657)
- b. Sánchez MF, Tampé R (2022) Ligand-independent receptor clustering modulates transmembrane signaling: a new paradigm. *Trends Biochem Sci*, online. [doi:10.1016/j.tibs.2022.08.002](https://doi.org/10.1016/j.tibs.2022.08.002)
- c. Sánchez MF, Dietz MS, Müller U, Weghuber J, Gatterdam K, Wieneke R, Heilemann M, Lanzerstorfer P, Tampé R (2022) Dynamic in situ confinement triggers ligand-free neuropeptide receptor signaling. *Nano Lett* 22, 8363–8371. [doi:10.1021/acs.nanolett.2c03506](https://doi.org/10.1021/acs.nanolett.2c03506)

5. Intelligent Probes and Nanotools in Chemical Biology

- a. Winter C, Domnick A, Cernova D, Tampé R (2022) Semisynthetic viral inhibitor for light control of the MHC I peptide loading complex. *Angew Chem Int Ed*, e202211826. [doi:10.1002/anie.202211826](https://doi.org/10.1002/anie.202211826)

- b. Joest EF, Winter C, Wesalo JS, Deiters A, Tampé R (2022) Efficient amber suppression via ribosomal skipping for in situ synthesis of photoconditional nanobodies. *ACS Synth Biol* 11, 1466-76. [doi:10.1021/acssynbio.1c00471](https://doi.org/10.1021/acssynbio.1c00471)
- c. Diederichs T, Pugh G, Dovey A, Xing Y, Burns JR, Nguyen QH, Tornow M, Tampé R*, Howorka S* (2019) Synthetic protein-conductive membrane nanopores built with DNA. *Nat Commun* 10, 5018. (*corr. author) [doi:10.1038/s41467-019-12639-y](https://doi.org/10.1038/s41467-019-12639-y)
- d. Gatterdam K, Joest EF, Gatterdam V, Tampé R (2018) The scaffold design of trivalent chelator heads dictates affinity and stability for labeling His-tagged proteins in vitro and in cells. *Angew Chem Int Ed* 57, 12395-9. [doi:10.1002/anie.201802746](https://doi.org/10.1002/anie.201802746)

Leadership in Large Research Clusters and Networks

- Head of Research Center CRC 1507 – *Membrane Assemblies, Machineries, and Supercomplexes*
- Head of Research Center CRC 807 – *Membrane Transport and Communication*
- Cofounder, Board of Directors, Cluster of Excellence – *Macromolecular Complexes*
- Section Head, European Drug Initiative on Channels and Transporters (EDICT), EU 7FP
- Coordinator, European Membrane Biology Network (EMBNTrain), European Commission
- Coordinator of Research Center CRC 628 – *Functional Membrane Proteomics*

Invited Lectures at International Conferences (selection out of >300)

- [APEX Lecture](#), Vanderbilt University, Nashville, TN, USA, 2024
- [William E. Mahoney Lecture](#), University of Massachusetts, Amherst, MA, USA, 2024
- [Carl F. Schmidt Lecture](#), University of Pennsylvania, Philadelphia, USA, 2023
- [Philip Bard Lectureship](#), Johns Hopkins School of Medicine, Baltimore, USA, 2023
- [Arnold D. Welch Lectureship](#), Yale University, New Haven, USA, 2022
- Kavli Lecture, University of Oxford, UK, 2022
- Cold Spring Harbor Symposium, Protein Homeostasis, 2022
- Gordon Research Conference, Membrane Transport Proteins, Barcelona, 2022
- EMBO Lecture, Lorne Conference, Melbourne, Australia, 2022
- Gordon Research Conference, Ligand Recognition and Molecular Gating, Barga, Lucca, 2022
- INSERM Conference, Membrane proteins in reconstituted systems, Bordeaux, France, 2022
- Keynote Opening Lecture, ISBUC Annual Meeting, Copenhagen, Denmark, 2021
- Keynote Lecture, NWO CHAINS, The Dutch Chemistry Society, NL, 2019
- Baruch S. Blumberg (Nobel Prize 1976) Lecture, Science Museum, Oxford, UK, 2019
- Keynote Lecture, Texas Center Membrane Protein Research Symposium, USA, 2019
- Keynote Lecture, FEBS International Conference, Budapest, Hungary, 2019
- EMBO Lecture, Antigen Processing and Presentation, Paris, 2019
- Gordon Research Conference, Archaea, Les Diablerets, Switzerland, 2019
- Keynote Lecture FEBS Symposium, Budapest, Hungary, 2019

Transdisciplinarity / Networking: Research projects have been highly interdisciplinary as documented by the wide scope of publications. Driven by fundamental questions, the lab of Robert Tampé applies the full range of methods, ranging from cryo-EM, X-ray crystallography, EPR/NMR spectroscopy, single-molecule analysis to new immunological approaches, new labeling techniques, and chemical biology. In addition, some demanding projects were supported by collaborations with highly experienced scientists, i.e. Martin Beck (EMBL Heidelberg), Roland Beckmann (Munich), Yifan Cheng (UCSF), Thorben Cordes (Munich), Peter Cresswell (Yale), Simon J. Davis (Oxford), Clemens Glaubitz (Frankfurt), Mike Heilemann (Frankfurt), Gerhard Hummer (Frankfurt), Tony Kossiakoff (Chicago), Arne Moeller (Frankfurt), Daniel Müller (Basel), Simon Newstead (Oxford), Bert Poolman (Groningen), Carol Robinson (Oxford), Robert Stroud (UCSF), Hiroaki Suga (Tokyo), Nicole Zitzmann (Oxford). In return, the Tampé lab has shared know-how and reagents with the scientific community, including antibodies against PLC components, multivalent chelator probes, and chelator lipids, which are now commercially available and used world-wide.

10 Selected Publications (last 8 years)

[Google Scholar](#): >300 publications, 25,000 citations; h-index 83; i10-index 264 | [Research Gate](#) | [Research Loop](#)).

[Complete List of Published Work](#)

- 1) Barends M, Koller N, Schölz C, Durán V, Bošnjak B, Becker J, Döring M, Bles H, Förster R, Kalinke U, Tampé R (2023) Dynamic interactome of the MHC I peptide loading complex in human dendritic cells. *Proc Natl Acad Sci USA* 120, e2219790120. [doi:10.1073/pnas.2219790120](https://doi.org/10.1073/pnas.2219790120)
- 2) Sušac L, Yuong MT, Thomas C, von Bülow S, O'Brien-Ball C, Santos AM, Fernandes RA, Hummer G, Tampé R*, Davis SJ* (2022) Structure of a fully assembled tumor-specific T-cell receptor ligated by pMHC. *Cell* 185, 3201-13. [doi:10.1016/j.cell.2022.07.010](https://doi.org/10.1016/j.cell.2022.07.010) (Research Highlight in *Nat Struct Mol Biol*, *Science Immunology*, and *Cancer Discovery*)
- 3) Domnick A, Winter C, Sušac L, Hennecke L, Hensen M, Zitzmann N, Trowitzsch S, Thomas C, Tampé R (2022) Molecular basis of MHC I quality control in the peptide loading complex. *Nat Commun* 13, 4701. [doi:10.1038/s41467-022-32384-z](https://doi.org/10.1038/s41467-022-32384-z)
- 4) Sánchez MF, Els-Heindl S, Beck-Sickinger AG, Wieneke R, Tampé R (2021) Photo-induced receptor confinement drives ligand-independent GPCR signaling. *Science*, eabb7657. [doi:10.1126/science.abb7657](https://doi.org/10.1126/science.abb7657) (Research Highlight in *Nature Chemical Biology* and *Faculty 1000 Recommended* 9.8)
- 5) Nürnberg-Goloub E, Kratzat H, Heilemann H, Heuer A, Kötter P, Berninghausen O, Becker T, Tampé R*., Beckmann R* (2020) Molecular analysis of the ribosome recycling factor ABCE1 bound to the 30S post-splitting complex. *EMBO J*, 39, e103788. [doi:10.15252/emboj.2019103788](https://doi.org/10.15252/emboj.2019103788) (Front Cover Story in *EMBO J* 2020)
- 6) Hofmann S, Janulienė D, Mehdipour AR, Thomas C, Stefan E, Brüchert S, Kuhn BT, Geertsma ER, Hummer G, Tampé R*., Moeller A* (2019) Conformation space of a heterodimeric ABC exporter under turnover conditions. *Nature* 471, 580-3. [doi:10.1038/s41586-019-1391-0](https://doi.org/10.1038/s41586-019-1391-0) (Front Cover Story in *Nature* 2019)
- 7) Bles A, Janulienė D, Hofmann T, Koller N, Schmidt C, Trowitzsch S, Moeller A, Tampé R (2017) Structure of the human MHC-I peptide-loading complex. *Nature* 551, 525-8. [doi:10.1038/nature24627](https://doi.org/10.1038/nature24627) (Front Cover Story and News & View in *Nature* 2017; Dispatch in *Current Biology* 2018; Highlight in *F1000* 2018; Viewpoint in *Mol Immunol* 2018; Most Cited Paper in *Web of Science*)
- 8) Thomas C, Tampé R (2017) Structure of the TAPBPR-MHC I complex defines the mechanism of peptide loading and editing. *Science* 358, 1060-4. [doi:10.1126/science.aao6001](https://doi.org/10.1126/science.aao6001) (Insights and Perspectives in *Science* 2017; News & View in *Nature* 2017; Highlight in *Faculty 1000* 2018; Viewpoint in *Biochemistry* 2018)
- 9) Heuer A, Gerovac M, Schmidt C, Trowitzsch S, Preis A, Kötter P, Berninghausen O, Becker T, Beckmann R, Tampé R (2017) Structure of the 40S-ABCE1 post-splitting complex in ribosome recycling and translation initiation. *Nat Struct Mol Biol* 24, 453-60. [doi:10.1038/nsmb.3396](https://doi.org/10.1038/nsmb.3396) (Cover Page in *Nat Struct Mol Biol*; Preview in *Mol Cell* 2017)
- 10) Kim JM, Wu S, Tomasiak T, Mergel C, Winter MN, Stiller S, Robles-Colmanares Y, Stroud RM*, Tampé R*, Craik CS*, Cheng Y* (2015) Subnanometre-resolution electron cryomicroscopy structure of a heterodimeric ABC exporter. *Nature* 517, 396-400. [doi:10.1038/nature13872](https://doi.org/10.1038/nature13872)

* corresponding / # lead author



Selected Reviews (within the last 5 years)

- 1) Sánchez MF, Tampé R (2023) Ligand-independent receptor clustering modulates transmembrane signaling: a new paradigm. *Trends Biochem Sci* 48, 156-71. [doi:10.1016/j.tibs.2022.08.002](https://doi.org/10.1016/j.tibs.2022.08.002)
– highlighted as front cover story
- 2) Thomas C, Tampé R (2021) MHC I assembly and peptide editing – Chaperones, clients, and molecular plasticity. *Curr Opin Immunol* 70, 48-56. [doi:10.1016/j.coi.2021.02.004](https://doi.org/10.1016/j.coi.2021.02.004)
- 3) Thomas C, Tampé R (2020) Structural and mechanistic principles of ABC transporters. *Annu Rev Biochem* 89, 605-36. [doi:10.1146/annurev-biochem-011520-105201](https://doi.org/10.1146/annurev-biochem-011520-105201)
- 4) Trowitzsch S, Tampé R (2020) Multifunctional chaperone and quality control complexes in adaptive immunity. *Annu Rev Biophys* 49, 135-161. [doi:10.1146/annurev-biophys-121219-081643](https://doi.org/10.1146/annurev-biophys-121219-081643)
- 5) Wieneke R, Tampé R (2019) Multivalent chelators for in vivo protein labeling. *Angew Chem* 58, 8278-90. [doi:10.1002/anie.201811293](https://doi.org/10.1002/anie.201811293)

Selected Collaborative Work

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