

# Kathrin Leppek, Ph.D. (she/her)

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## Research Experience / Appointments

- 01/2022 – present **Tenure-track W1/2 Junior-Professor for Immunobiochemistry (TT W2 since 01/25)**  
• University Hospital Bonn (UKB), Institute of Clinical Chemistry and Clinical Pharmacology (IKCKP), Biomedical Center II, University of Bonn, Germany  
*Transcript-specific Translation by the Ribosome; RNA, Ribosome, Innate Immunity*
- 01/2015 – 12/2021 **Postdoctoral Fellow and Research Associate, Stanford University, CA, USA**  
• Advisor: **Maria Barna** (Department of Developmental Biology & Genetics)  
*RNA, Ribosome, Mouse Embryo Development*
- 03/2014 – 11/2014 **Postdoctoral Fellow, DKFZ and University of Heidelberg, Germany**  
German Cancer Research Center (DKFZ) and Center for Molecular Biology (ZMBH)  
• Advisor: **Georg Stoecklin** (DKFZ-ZMBH Alliance)  
*RNA, mRNA Decay, Innate Immunity, Structural Biology*

## Education

- 11/2010 – 03/2014 **Ph.D. in RNA, Immunology and Cancer Molecular Biology**  
**German Cancer Research Center (DKFZ) and University of Heidelberg, Germany**  
• Advisor: **Georg Stoecklin** (DKFZ-ZMBH Alliance)  
• Ph.D. Thesis: RNA Affinity Purification and Characterization of Roquin Proteins in CDE-mediated mRNA Decay. 3.5 years, **summa cum laude (Ph.D. defense 10.3.2014)**
- 10/2008 – 08/2010 **M.Sc. in Molecular Biosciences, Major: Molecular and Cellular Biology**  
**University of Heidelberg, Germany, grade: 1.0 (1.0 highest grade)**
- 08/18 – 12/14/2009 **Visiting Scholar, UC Berkeley, Berkeley, CA, USA, Ming C. Hammond lab**
- 10/2005 – 06/2008 **B.Sc. in Biology, Focus: Molecular Biology**  
**University of Heidelberg, Germany, grade: 1.3 (1.0 highest grade)**

## Scientific Positions

- 09/01 – 10/31/2010 **Student Research Assistant - DKFZ-ZMBH Alliance, Heidelberg, Georg Stoecklin lab**  
01/01 – 08/24/2010 **Master Thesis - DKFZ, Heidelberg, Georg Stoecklin lab**  
08/18 – 12/14/2009 **Visiting Scholar - UC Berkeley, Berkeley, CA, USA, Ming C. Hammond lab**  
06/02 – 07/10/2009 **Internship - DKFZ, Heidelberg, Ingrid Grummt lab**  
03/03 – 04/24/2009 **Internship - DKFZ, Heidelberg, Georg Stoecklin lab**  
06/14 – 10/31/2008 **Student Research Assistant - Heidelberg Institute for Plant Research (HIP), now Centre for Organismal Studies (COS), Heidelberg, Thomas Rausch lab**  
03/03 – 06/13/2008 **Bachelor Thesis - HIP, Heidelberg, Thomas Rausch lab**  
01/07 – 01/25/2008 **Internship - ZMBH, Heidelberg, Victor Sourjik lab**  
09/03 – 10/12/2007 **Internship - Karlsruhe Institute of Technology (KIT), Institute for Genetics and Toxicology, Karlsruhe, Germany, Uwe Strähle lab**

## Publications

Citations: **2535**, h-factor: 9, i10-factor: 9 (Google Scholar, 07/2025)

\*, \*\* authors contributed equally; ‡ co-corresponding authors

12. Koch P\*, Zhang Z\*, Genuth NR\*, Susanto TT, Haimann M, Khmelinskaia A, Byeon GW, Dey S, Barna M‡, **Leppek K‡**. A versatile toolbox for determining IRES activity in cells and embryonic tissues. **EMBO J.** 2025 Mar 13. doi: 10.1038/s44318-025-00404-5. (see **Media Coverage for press release**)
11. **Leppek K\***, Byeon GW\*, Kladwang W\*, Wayment-Steele HK\*, Kerr CH\*, Xu AF\*\*, Kim DS\*\*, Topkar VV, Choe C, Rothschild D, Tiu GC, Wellington-Oguri R, Fujii K, Sharma E, Watkins AM, Nicol JJ, Romano J, Tunguz B,

Diaz F, Cai H, Guo P, Wu J, Meng F, Shi S, Eterna Participants, Dormitzer PR, Solórzano A, Barna M†, Das R†. Combinatorial optimization of mRNA structure, stability, and translation for RNA-based therapeutics. *Nature Comm.* 2022 Mar;13(1): 1536,1-22. doi: 10.1038/s41467-022-28776-w.

10. **Leppek K\***, Byeon GW\*, Fujii K, Barna M. VELCRO-IP RNA-seq reveals ribosome expansion segment function in translation genome-wide. (\*authors contributed equally)  
*Cell Reports*, 2021 Jan 19;34(3):108629. doi: 10.1016/j.celrep.2020.108629.
9. **Leppek K**, Fujii K, Quade N, Susanto TT, Boehringer D, Lenarčič T, Xue S, Genuth NR, Ban, N, Barna M. Gene- and species-specific Hox mRNA translation by ribosome expansion segments.  
*Mol. Cell*, 2020 Dec 17;80(6):980-995.e13. doi: 10.1016/j.molcel.2020.10.023.
8. **Leppek K**, Barna M. An rRNA variant to deal with stress.  
*Nat Microbiol.* 2019 Mar;4(3):382-383. doi: 10.1038/s41564-019-0396-7.
7. **Leppek K**, Das R, Barna M. Functional 5' UTR mRNA structures in eukaryotic translation regulation and how to find them.  
*Nat Rev Mol Cell Biol.* 2018 Mar;19(3):158-174. doi: 10.1038/nrm.2017.103. (Epub Nov 22, 2017)
6. Simsek D, Tiu GC, Flynn RA, Byeon GW, **Leppek K**, Xu AF, Chang HY, Barna M. The Mammalian Ribo-interactome Reveals Ribosome Functional Diversity and Heterogeneity.  
*Cell*. 2017 Jun 1;169(6):1051-1065.e18. doi: 10.1016/j.cell.2017.05.022.
5. Codutti L, **Leppek K**, Zálešák J, Windeisen V, Masiewicz P, Stoecklin G and Carlomagno T. A distinct, sequence-induced conformation is required for recognition of the CDE RNA by Roquin.  
*Structure*. 2015 Aug 4;23(8):1437-1447. doi: 10.1016/j.str.2015.06.001.
4. **Leppek K** and Stoecklin G. An optimized streptavidin-binding RNA aptamer for purification of ribonucleoprotein complexes identifies novel ARE-binding proteins.  
*Nucl Acids Res.* 2014 Jan;42(2):e13. doi: 10.1093/nar/gkt956. (Epub Oct 23, 2013)
3. **Leppek K**, Schott J, Reitter S, Poetz F, Hammond MC, Stoecklin G. Roquin promotes constitutive mRNA decay via a conserved class of stem-loop recognition motifs.  
*Cell*. 2013 May 9;153(4):869-81. doi: 10.1016/j.cell.2013.04.016. (see **Media Coverage for press release**)
2. Spasic M, Friedel CC, Schott J, Kreth J, **Leppek K**, Hofmann S, Ozgur S, Stoecklin G. Genome-wide assessment of AU-rich elements by the AREScore algorithm.  
*PLoS Genet.* 2012 Jan;8(1):e1002433. doi: 10.1371/journal.pgen.1002433.
1. **Leppek K**, Schott J, Stoecklin G. Protein synthesis and translational control: at eye level with the ribosome.  
*EMBO Rep.* 2011 Dec 1;12(12):1214-6. doi: 10.1038/embor.2011.224.

#### Independent Funding

03/2025	• <b>Fritz Thyssen Stiftung Grant</b> , Projektförderung, <b>247.500€</b> , (2+1 years)
07/2024	• <b>Australian Research Council (ARC) Discovery Project, Australia</b> , with Prof. Eduardo Eyras, ANU Canberra, supporting co-PI, <b>760.000AUD</b> , (4 years)
01/2024	• <b>RNA Salon "Rhineland RNA Club"</b> (RNA Society), <b>Co-organizer</b> with Dr. Ina Huppertz (MPI AGE Cologne), 3x/year in Cologne/Bonn, 100-120 attendees, <b>\$1500/year</b> , (1+2 years), plus four industry sponsors of total <b>5.000€/year</b>
12/2023	• <b>TRA Life and Health Research Prize 2024</b> , with Prof. Maximillian Billmann, <b>50.000€</b> , (1 year)
03/2023-2026	• <b>Human Frontier Science Program, Early Career Award</b> , team of 4 PIs, <b>1.5 Mio €</b> , <b>325.000 €</b> per PI for Postdoc position, (3 years)
10/2022	• <b>PhD Position</b> , Excellence Cluster ImmunoSensation2, Uni Bonn, <b>160.500€</b> , (3 years)
01/2022	• <b>PhD Position</b> , Strengthening the Equal Opportunity Process (STEP) Program, Uni Bonn, <b>160.500€</b> , (3 years)

#### Full Memberships

04/2023 – present	• Transdisciplinary Research Area (TRA) 3, Life and Health, University of Bonn
04/2022 – present	• Bonn Forum for Biomedicine (BFB)
03/2022	• Deutscher Hochschulverbund (DHV)
03/2022	• Gesellschaft für Biochemie und Molekularbiologie (GBM e.V.)
02/2022 – present	• ImmunoSensation2 Excellence Cluster
2012 – present	• RNA Society, active member since 2012

## Research Funding - Training

### POSTDOC FELLOWSHIPS

- 09/2019 – 08/2020 • **Katharine McCormick Advanced Postdoctoral Fellowship** to Support Women in Academic Medicine, Stanford (1 year, 1 fellowship/year at Stanford, \$70.000)
- 10/2015 – 09/2019 • **Damon Runyon Cancer Research Foundation**, Postdoctoral Research Fellow (4 years, DRG-2237-15, 15 fellowships/twice a year in the US, \$238.000)
- 07/2015 – 09/2015 • **EMBO Long-Term Postdoctoral Fellowship** (2 years, ALTF 539-2015, \$90.000)

### Ph.D. FELLOWSHIPS

- 11/2010 – 11/2013 • **Ph.D. Stipend**, DKFZ Helmholtz Intern. Grad. School for Cancer Res. (3 years, accepted)
- 09/2010 • **Ph.D. Stipend**, EMBL International PhD Program (3 years, declined)
- 08/2009 – 12/2009 • **Research Stipend** (Burroughs Wellcome Fund to M.C. Hammond), Visiting Scholar, UC Berkeley, USA (4 months)

## Awards / Honors

- 02/2025 • **Poster Prize**, GRC “Translation Machinery in Health and Disease”, Pomona, LA, CA, USA, **\$500**
- 03/2023 • **RNA Society 2023 Research Presentation Fellowship, \$1.000**
- 11/2020 • **RNA Society/Scaringe Postdoctoral Fellow Award 2021, \$1.000**
- 11/2019 • **Finalist**, Damon Runyon Dale F. Frey Award for Breakthrough Scientists (3 awarded, 4<sup>th</sup>/12), NYC
- 12/2018 • **Best Talk Prize**: Bay Area RNA Club (BARC) Symposium, UCSF, CA, USA
- 05/2015 • **Karl-Lohmann Award**, Society for Biochemistry and Molecular Biology (GBM), **best PhD Thesis** in Biological Chemistry in 2014 (<https://de.wikipedia.org/wiki/Karl-Lohmann-Preis>), **€1.500**
- 02/2015 • **Ruprecht-Karls Award, best PhD Thesis** in the Faculty of Natural Sciences and Mathematics in 2014, Heidelberg University ([http://www.foerderer.uni-hd.de/stiftung/preise\\_archiv.html](http://www.foerderer.uni-hd.de/stiftung/preise_archiv.html))
- 01/2015 • 2<sup>nd</sup> place Bayer HealthCare Award, PhD Thesis Award of GBM, (2<sup>nd</sup>/31)
- 06/2014 • Poster Award: Non-coding RNA – From Basic Mechanisms to Cancer, DKFZ, Heidelberg, Germany
- 06/2012 • Travel Award: 17<sup>th</sup> Annual Meeting of the RNA Society 2012, Ann Arbor, USA
- 02/2012 • Poster Award: 2<sup>nd</sup> Heidelberg Forum For Young Life Scientists, Heidelberg, Germany
- 11/2010 • Image Award: DKFZ-ZMBH Alliance Retreat, Image of the Year 2010, Heidelberg, Germany

## Patents

- 09/2024 • Philipp Koch, Maria Barna, **Kathrin Leppek**: “Gene-Product Expression Constructs and Systems”, US63/695,706, US/EU provisional patent, shared IP of Stanford/Uni Bonn
- 05/2022 • Maria Barna, Rhiju Das, **Kathrin Leppek**, Gun Woo Byeon, Eesha Sharma: “Systems and methods to assess RNA stability”, US17/456,353; US20220162588A1
- 11/2022 • Maria Barna, **Kathrin Leppek**, Gun Woo Byeon: “Systems and Methods for Producing RNA Constructs with Increased Translation and Stability”, US11492611B2US18/053,324; US20230159915A1
- 08/2023 • Maria Barna, **Kathrin Leppek**, Gun Woo Byeon: “Systems and methods to assess RNA stability”, US17/454,795; US11739317B2
- 01/2024 • Maria Barna, **Kathrin Leppek**: “Systems and Methods for Enhancing Gene Expression”, US17/998,789; US20240002864A1; US17/998,788; US20240043835A1; WO2021231503A2

## Trainee Success

- 10/2022 • **BFB Travel Award**; Martin Haimann
- 01/2023 • **GBM Master Thesis Award**; Martin Haimann, best Master Thesis at Bonn University (first MSc student)

## Independent Mentoring

- 04/2025 – 09/2025 • Mr. Saurabh Dey, Master Student, Master Thesis and Research Assistant
- 05/2024 – 11/2024 • Ms. Moitrayee Dasgupta, B.A. exchange student scientist, CUNY, New York
- 01/2024 – present • Mr. Dr. Vivian Lobo, Postdoc
- 04/2023 – present • Ms. Aiswarya Gopal, PhD Thesis
- 04/2023 – present • Mr. Philipp B. Koch, MSc Lab Rotation, PhD Thesis
- 12/2022 – present • Ms. Samyukta Narayanan, PhD Thesis
- 10/2022 – present • Mr. Martin G. Haimann, PhD Thesis
- 03/2022 – 09/2022 • Mr. Martin G. Haimann, Master Student, Master Thesis
- MSc Rotation Students (2-months internships): 3 in 2023; 4 in 2024*

## Independent Teaching

### PhD THESIS ADVISORY COMMITTEES (TAC)

- 03/2025 • PhD Assessment Committee of Chinenye Ekemezie, Sergey Melnikov Lab, Uni Newcastle, UK, in person defense examination
- 01/2025 • PhD Thesis Advisory Committee, Mahima Dey, Capasso Lab, DZNE
- 12/2024 • PhD Thesis Advisory Committee, Yingxiao, Capasso Lab, DZNE
- 07/2024 • PhD Thesis Advisory Committee, Diana Fink, Meissner Lab, III, UKB

- 01/2024 • PhD Assessment Committee of Frederic Schröder Wenzel Arendrup, Anders Lund Lab, Uni Copenhagen, DK, in person defense examination
- 09/2023 • PhD Thesis Advisory Committee, Benedikt Gansen, Meissner Lab, III, UKB
- LECTURES / CLASSES**
- 04/2025 • Uni Bonn, Teacher's Seminar, 1 lecture/semester, MCB MSc students
- 07/2024, 25 • Uni Bonn, Elective Module BrownFatRNADynamics, 2-week practical course with Prof. Kerstin Wilhelm-Jüngling, 4-6 MSc students
- 10/2023 • TRR Career Day, Career Paths in Academia: RNA Research and Beyond: Navigating an Academic Career (Invited Talk, Virtual)
- 10/2023 • Uni Bonn, Aktuelle Themen der Molekularen Biomedizin, 1 lecture/semester, BSc students
- 10/2023, 25 • Uni Bonn, Methods in life science and statistics, 1 lecture/semester, MSc students, exam
- 05/2023 • IITB PhD Students Symposium (BIGS graduate school) in Bonn, Invited Talk
- 10/2022 • New York University, NYC, Molecular Biochemistry, 1 guest lecture (virtual), PhD students
- 10/2022, 23, 24 • Uni Bonn, Challenges in Medical Immunosciences, 1 lecture/semester, PhD/Master students

#### Invited Talks (26 Talks as PI)

##### **INDEPENDENT**

- 07/2025 • RNA Pharmacology Talk, TU Munich (Invited Talk)
- 06/2025 • Heidelberg RNA / Translation Club Retreat, University of Heidelberg (Invited External Speaker)
- 05/2025 • University of Tampere, Finland, RNA Seminar (Invited External Speaker)
- 05/2025 • RNAded Topic Day "Immune Recognition of RNA", LMU Munich (Invited External Speaker)
- 03/2025 • RNA Salon "Rhineland RNA Club", MPI Age Cologne (Invited Talk)
- 04/2024 • RNA Salon "RNA Club Munich", Helmholtz Center Munich (Invited External Speaker)
- 01/2024 • Ribosome/Translation Regulation Mini-Symposium, Uni Copenhagen, DK (Invited Talk)
- 11/2023 • Ribosome Heterogeneity and Specialization, Sci. Meeting, The Royal Society, London, UK (Invited Talk, Poster Judge)
- 10/2023 • TRR Career Day, Career Paths in Academia: RNA Research and Beyond: Navigating an Academic Career (Invited Talk, Virtual)
- 09/2023 • UC Berkeley, Molecular and Cellular Biology, Department Seminar (Invited Talk)
- 06/2023 • 50 Years Shine-Dalgarno - The impact of RNA Science and Innovation, Australian National University, Canberra ACT, Australia (Invited Talk)
- 05/2023 • IITB PhD Students Symposium of the BIGS graduate school in Bonn (Invited Talk)
- 04/2023 • Day of Immunology, lay talk to the public, Bonn City Library (Invited Talk)
- 03/2023 • GBM Lunch Talk (Invited Talk, Virtual)
- 03/2023 • Rhineland RNA Club, kick-off meeting (Invited Talk, Virtual)
- 12/2022 • Max Planck Institute for Aging, University of Cologne, Guest Lecture (Invited Talk)
- 11/2022 • University of Münster, Guest Lecture in the Biochemistry Colloquium (Invited Talk)
- 11/2022 • ImmunoSensation2 Excellence Cluster, Cluster Science Days 2022 (Invited Talk)
- 09/2022 • University of Jena, 2022 Jena RNA Club Symposium (Invited Talk)
- 05/2022 • University of Bonn, TRA Life Health "TRA2 - Life and Health Matter(s)", Flash Talk (Invited Talk)
- 04/2022 • University of Giessen, Biochemistry, RTG2355 Guest Lecture (Invited Talk)
- 04/2022 • City Univ of NY (CUNY) Hunters College, Hunter Belfer Seminar Series, NYC, USA (Invited Talk, Virtual)
- 03/2022 • University of Bonn, IMMEI institute (UKB) Guest Seminar (Invited Talk, Virtual)
- 02/2022 • ImmunoSensation2 Inaugural Member Lecture (Invited Talk, Virtual)
- 01/2022 • TransRegio TRR237 Nucleic Acid Immunity, Guest Seminar (Invited Talk, Virtual)
- 01/2022 • Medical Faculty Meeting, Introduction of new Professorship (Invited Talk, Virtual)

##### **DURING TRAINING**

- 11/2019 • Damon Runyon Dale F. Frey Award for Breakthrough Scientists, NYC, NY, USA (Invited Talk)
- 12/2018 • Columbia University, NYC – Biophysics Department, NYC, NY, USA (Invited Talk)
- 06/2017 • Miroculus (Start-up), San Francisco, Friday Seminar, San Francisco, CA, USA (Invited Talk)

#### Conferences – Presentations

##### **ORAL**

- 09/2025 • EMBO Conference Series "Protein Synthesis and Translational Control", Heidelberg
- 02/2025 • GRC "Translation Machinery in Health and Disease", Pomona, LA, USA (Flash Talk, Poster, GRS Mentoring Panel)
- 10/2023 • GBM Study Group "RNA Biochemistry" Meeting & Workshop, Bonn
- 06/2021 • 26<sup>th</sup> Annual Meeting of the RNA Society 2021 (Virtual) – Scaringe Postdoc Award Invited Talk
- 07/2020 • EternaCon (Eternagame Convention), OpenVaccine project, (Virtual)
- 12/2018 • Bay Area RNA Club (BARC) Symposium, Genentech Hall, UCSF, CA, USA
- 05/2018 • 23<sup>rd</sup> Annual Meeting of the RNA Society 2018, Berkeley, CA, USA
- 09/2015 • ZMBH Alumni Forum, 30<sup>th</sup> Anniversary, Heidelberg, Germany
- 07/2015 • 40<sup>th</sup> FEBS Congress – The Biochemical Basis of Life, Berlin, Germany
- 06/2013 • 18<sup>th</sup> Annual Meeting of the RNA Society 2013, Davos, Switzerland



- 06/2012 • 17<sup>th</sup> Annual Meeting of the RNA Society 2012, Ann Arbor, Michigan, USA
- 09/2011 • EMBO Conference Series “Protein Synthesis and Translational Control”, Heidelberg, Germany

#### **POSTER / Participation**

- 10/2025 • GBM Study Group “RNA Biochemistry” Meeting & Workshop, Bonn (Participation)
- 10/2024 • Ruprecht-Karls-Preis Preisträgertreffen (Award Recipient Retreat), Uni Heidelberg (Participation)
- 10/2024 • EMBO Conference Series “Complex Life of RNA”, Heidelberg, Germany (Participation)
- 01/2024 • DKFZ Alumni Kick-start 2024: Careers beyond DKFZ, 60 Year Anniversary (Participation)
- 11/2023 • ImmunoSensation2 Excellence Cluster, Cluster Science Days (Participation, Poster Judge)
- 09/2023 • EMBO Conference Series “Protein Synthesis and Translational Control”, Heidelberg (Participation)
- 05/2023 • 28<sup>th</sup> Annual Meeting of the RNA Society 2023, Singapore, SNG (Poster)
- 06/2022 • EMBO Workshop: “RNA: Structure meets Function”, Akersberga, Sweden (Poster)
- 10/2020 • EMBO/EMBL Symposium: “The Complex Life of mRNA”, Heidelberg, Germany, (Virtual, Poster)
- 09/2020 • EMBO Conference Series “Protein Synthesis and Translational Control”, CSHL, USA (Virtual, Poster)
- 05/2020 • 25<sup>th</sup> Annual Meeting of the RNA Society 2020 (Virtual, Participation)
- 01/2019 • Ribosome – Structure and Function 2019, Merida, Yucatan, Mexico (Poster)
- 09/2017 • EMBO Conference Series “Protein Synthesis and Translational Control”, Heidelberg (Poster)
- 09/2015 • EMBO Conference Series “Protein Synthesis and Translational Control”, Heidelberg (Poster)
- 11/2014 • SFB1036 Conf. “Mol. Mech. of Cellular Surveillance and Damage Responses”, Heidelberg (Poster)
- 10/2014 • TERM13: Tiny European RNA Meeting 2014, Paris, France (Poster)
- 10/2014 • EMBO/EMBL Symposium: “The Complex Life of mRNA”, Heidelberg (Poster)
- 06/2014 • Non-coding RNA – From Basic Mechanisms to Cancer, Heidelberg (Poster)
- 12/2012 • Cell Symposium “Functional RNAs”, Sitges, Spain (Poster)
- 02/2012 • 2<sup>nd</sup> Heidelberg Forum For Young Life Scientists, Heidelberg, Germany (Poster)

#### **Internal Symposia**

- 11/2024 • Medical Faculty Retreat, Maria Laach, “Impulse” Center Presentation (Talk)
- 11/2024 • ImmunoSensation2 Excellence Cluster, Cluster Science Days 2024 (Participation, Poster Judge)
- 02/2024 • Bonn Forum Biomedicine (BFB) Retreat, Hennef, Germany (Participation)
- 11/2023 • ImmunoSensation2 Excellence Cluster, Cluster Science Days 2023 (Participation, Poster Judge)
- 02/2023 • Bonn Forum Biomedicine (BFB) Retreat, Hennef, Germany (Talk)
- 06/2022 • ICCCP Institute Retreat, Monschau, Germany (Talk)
- 05/2022 • ImmunoSensation2 Cluster Retreat, Marseille, France (Participation)
- 12/2020 • Bay Area RNA Club (BARC) Symposium, (Virtual), (Participation)
- 09/2020 • Stanford Genetics Department Retreat, Stanford, CA, (Virtual), (Poster)
- 07/2020 • Joint ITI CCHI U19/Gates/DRC Research Meeting (Institute for Immunity, Transplantation and Infection (ITI); Cooperative Centers on Human Immunology (CCHI); Bill & Melinda Gates Foundation; Stanford Diabetes Research Center (SDRC)), Stanford, CA, (Virtual), (Talk)
- 12/2019 • Bay Area RNA Club (BARC) Symposium, Genentech Hall, UCSF (Participation)
- 09/2019 • Stanford Genetics Department Retreat, Monterey, CA (Poster)
- 10/2018 • Developmental Biology Department Data Discussion (3D), Stanford, CA (Talk)
- 09/2018 • Stanford Developmental Biology Department Retreat, Monterey, CA (Talk)
- 09/2018 • Bay Area Postdoc Symposium, Berkeley Lawrence Lab, CA, USA (Participation)
- 06/2018 • EMBO Fellows Retreat, Heidelberg, Germany (Talk)
- 12/2017 • Bay Area RNA Club (BARC) Symposium, Genentech Hall, UCSF (Participation)
- 09/2017 • Damon Runyon Fellows Retreat 2017, Boston, MA, USA (3<sup>rd</sup> year, Talk)
- 09/2017 • Stanford Genetics Department Retreat, Monterey, CA (Poster)
- 06/2017 • Bay Area Postdoc Symposium, Buck Institute, Novato, CA (Participation)
- 11/2016 • EMBO Fellows Retreat, Boston, MA (Poster)
- 09/2016 • Stanford Genetics Department Retreat, Monterey, CA (Poster)
- 09/2016 • Stanford Developmental Biology Department Retreat, Monterey, CA (Poster)
- 09/2015 • Damon Runyon Fellows Retreat 2015, San Jose, CA, USA (1<sup>st</sup> year, Poster)
- 07/2015 • Bay Area RNA Club Symposium, Genentech Hall, UCSF (Participation)
- 07/2013 • DKFZ Career Day, Science Communication (Participation)
- 03/2013 • Internal RNA@DKFZ Meeting, DKFZ, Heidelberg, Germany (Talk)
- 02/2013 • DKFZ-ZMBH Alliance Retreat, Kloster Schöntal, Germany (Poster)
- 07/2012 • Internal RNA@DKFZ Meeting, DKFZ, Heidelberg, Germany (Poster)
- 05/2012 • RNA Labs Retreat (Stoecklin, Mühlemann, Bühler), Miglieglia, Switzerland (Talk)
- 12/2011 • DKFZ PhD Poster Presentation, Heidelberg, Germany
- 11/2011 • DKFZ-ZMBH Alliance Seminar Series, Heidelberg, Germany (Talk)
- 07/2011 • DKFZ PhD Retreat, Weil der Stadt, Germany (Poster)
- 05/2011 • ZMBH PhD Retreat, Rothenburg ob der Tauber, Germany (Talk)
- 11/2010 • DKFZ-ZMBH Alliance Retreat, Altleiningen, Germany (Talk)
- 06/2008 • B.Sc. Graduation Ceremony, Bachelor Thesis Poster Presentation (Poster)

## OTHER

- 06/2023 • DKFZ Alumni Zoom Meeting and Alumni Focus interview for DKFZ Newsletter
- 09/2017 • Nature Publishing Group San Francisco, Invited Discussion on "Success in Science" (Participation)
- 08/2017 • GAIN Conference, San Francisco, CA, USA (Participation)
- 08/2015 • GAIN (German Academic International Network) Conference, San Francisco, CA, USA (Participation)

## Invited Speaker Organisation

- 11/2025 • Prof. Simon Bekker-Jensen, University of Copenhagen, DK, Cluster Lecture Series/RNA Club
- 06/2024 • Prof. Olena Zhulyn, SickKids, University of Toronto, Toronto, CAN; Guest Lecture
- 04/2024 • Prof. Samuel Sternberg, Columbia University, New York, NY, USA; Cluster Lecture Series
- 03/2024 • Dr. Gun Woo Byeon, University of Washington, WA; Guest Lecture
- 09/2023 • Prof. Kotaro Fujii, University of Florida, Gainesville, FL, USA; Guest Lecture

## Scientific Contributions / Service

- 05/2024 – present • **Selection Committee** for **DAAD PhD Stipends**, Referee
- 02/2024 – present • **Selection Committee** for **DAAD PRIME Postdoc Stipends**, Referee
- 01/2024 – present • **Steering Committee**, Medical Faculty representative for the new "IMPULSE – House of Intellectual Innovation and Creativity" at the University of Bonn
- 09/2023 – present • **Scientific Expert** for Hoyng Rokh Monegier Düsseldorf for BioNTech RNA vaccine patent trial
- 03/2023 – present • **Co-organizer** of **Rhineland RNA Club** meetings, 3x/year, Cologne/Bonn/Düsseldorf/Aachen
- 2018 • **Re-/previewed** a paper for *Nature Microbiology* (Leppek K, and Barna M., *Nat Microbiol.* 2019)
- 2018 – present • **Solicited reviewer** for journals *RNA Biology*, *Nucleic Acids Research*, *Developmental Cell*, *Chemical Science*, *Nature Communications*

## Media Coverage

- 05/2025 • **Spot on Science**, Episode#14, Phillip Koch: Toolbox for determining IRES activity in cells. <https://www.youtube.com/watch?v=PAELJDTJZvI>
- 03/2025 • **UKB Press Release** for *EMBO Journal* paper, 20.3.2025. <https://www.ukbnewsroom.de/startpunkte-fuer-die-kontrolle-der-proteinsynthese/>
- 01/2024 • **TRA Research Prize Press Release**, YouTube video for Uni Bonn. 12.4.2024. <https://youtu.be/H6KzQuuRhlo?si=vu0eW3b6vQ66-s9m>
- 06/2023 • **Day of Immunology 2023**, ImmunoSensation2 Excellencecluster YouTube video. <https://www.youtube.com/watch?v=IDdrTrI9h9Q>
- 05/2023 • **Cluster/DZNE/Medizin NRW Press Release**: Tuning brain cells with light. (HFSP Early Career Award) <https://www.immunosensation.de/news/tuning-brain-cells-with-light>  
<https://www.dzne.de/en/news/press-releases/press/tuning-brain-cells-with-light/>  
<https://www.medicin.nrw/news/mikroglia-zellen-mit-licht-steuern/>
- 07/2022 • **The Ribozone Podcast** (Episode 12): Making the Transition from Postdoc to PI with Dr. Kathrin Leppek. <https://podcasts.apple.com/us/podcast/episode-12-making-the-transition-from-postdoc-to-pi/id1629937580?i=1000567715281>
- 05/2022 • **News Article** Damon Runyon Cancer Research Foundation: Toward new and improved mRNA vaccines. <https://www.damonrunyon.org/our-impact/new-discoveries/entries/6746/Toward%20new%20and%20improved%20mRNA%20vaccines>
- 10/2021 • **Fifty Years Translation Podcast** (Season 3, Episode 6): Screening for Enhanced RNA Vaccines with Kathrin Leppek, Gun Byeon, and Hannah Wayment-Steele. <https://fiftyyears.com/translation-podcast/2021/10/14/screening-for-enhanced-rna-vaccines-with-kathrin-leppek-gun-byeon-hannah-wayment-steele>
- 07/2021 • **News Article** Badische Neuste Nachrichten (BNN): Kampf gegen Corona: Wie eine Forscherin aus Bretten mRNA-Impfstoffe verbessert. <https://bnn.de/nachrichten/baden-wuerttemberg/kampf-gegen-corona-wie-eine-forscherin-aus-bretten-mrna-impfstoffe-verbessert>
- 04/2021 • **Stanford SoM SCOPE Blog**: Stabilizing RNA molecules to strengthen vaccines — including for COVID-19. <https://scopeblog.stanford.edu/2021/04/05/stabilizing-rna-molecules-to-strengthen-vaccines-including-for-covid-19/?sf141833328=1>
- 12/2019 • **RNA Society Member Spotlight**: Chun Kim and Olivia Rissland profiled me as a postdoc member of the RNA Society for their online spotlight series. <https://www.rnasociety.org/dr-kathrin-leppek>
- 05/2013 • **DKFZ Press Release** for Ph.D. work publication in *Cell*: Hairpin Serving As Gene Control. <https://www.dkfz.de/en/presse/pressemitteilungen/2013/dkfz-pm-13-29-Hairpin-Serving-As-Gene-Control.php>

## Outreach / Leadership / Functions

- 04/2023 • **Day of Immunology**, lay talk to the public and poster in German on mRNA therapeutics, Bonn City Library and Market Square, full day outreach event
- 03/2020 – 03/2022 • **Stanford COVID-19 mRNA Vaccine Project**  
I lead a team of 7 postdocs/students from M. Barna's lab (Stanford) that, together with the R. Das lab (Stanford), optimized the stability and expression of mRNA vaccines for COVID-19 in close

	collaboration with the citizen-science Eterna RNA folding videogame community (OpenVaccine Project) and from 01/2021-01/2022 with Pfizer.
04/2021	• <b>Speaker</b> at “Cutting-Edge Cancer Research: A Webinar for Bay Area High School Students” virtual event for the Damon Runyon Cancer Research Foundation
06/2020	• <b>Initiator, organizer and moderator</b> of a 2-hour Zoom discussion group on Translation Regulation as part of the virtual <b>RNA2020 conference</b> (115 scientists worldwide).
12/2018 – 2020	• <b>Initiator/organizer</b> of a postdoc group supporting the organization and planning of the <b>Bay Area RNA Club Symposium 2018</b> , UCSF, CA, USA: secured funding from the RNA Society and bay area companies for mentor lunch/poster/talk prizes and meeting report for RNA Society newsletter.
10/2018	• Represented scientists supported by the Damon Runyon Cancer Research Foundation in a team in the <b>Runyon Up Stair Climb For Cancer Research</b> , Salesforce Tower, San Francisco. I personally ranked #7 and our team #6 for top donations to \$200.000 donated.
05/2017	• Represented the Damon Runyon Cancer Research Foundation at a <b>benefit performance</b> of the musical Hamilton in San Francisco that raised nearly \$1 Mio. to support cancer research.
05/2013, 2014	• Volunteer helper at “DKFZ läuft für die Krebsforschung” (Run for Cancer Research)
06/2011	• Volunteer helper at “UniMeile” representing University of Heidelberg to the public

### Advanced Training

#### University Clinic Bonn, Germany

06/2022 • Women Connect Workshop (ExcellenceCluster): Gender, Power and Communication

#### Stanford, CA, USA

08/2020 • Creating Connections: An Introduction to the Alda Method® (Alan Alda Center for Communicating Science, at Stony Brook University) (1 session)

04/2020 • Preparation for Faculty Careers (2 months, weekly lecture series)

01/2019 • Scientific Management Series (lecture series)

04/2018 • Women Leadership Workshop: Improv Thinking with Speechless (1 session)

11/2016 • Improv for Communication II, 4-week workshop (4 sessions)

04/2016 • Improv for Communication I, 4-week workshop (4 sessions)

#### EMBL, Heidelberg, Germany

05/2012 • EMBL Advanced Course “Next Generation Sequencing Data Analysis”, 1 week

### Collaborations

#### Ongoing:

Daniel F. Jarosz (Stanford); Maria Barna (Stanford); Felix Meissner (III Bonn); Laura Surace (IKCKP Bonn); Ranen Aviner (Chan-Zukerberg Biohub, USA); Alena Khmelinskaia (Limes Bonn; LMU Munich); Dragomir Milovanovic (DZNE; Charite Berlin); Daniel Broere (Uni Utrecht, NL); Meng-meng Fu (UC Berkeley, USA); Melania Capasso (DZNE); Maximilian Billmann (Human Genetics, UKBonn); Anders Lund (Uni Copenhagen, DK), Jay Brito Querido (University of Michigan), Duygu Öztük-Kuzuoglu (UCSF)

#### Past:

Rhiju Das (Stanford); Philip R. Dormitzer (Pfizer); Nenad Ban (ETH Zürich); Howard Y. Chang (Stanford); Teresa Carlomagno (EMBL/Hannover University/Birmingham University UK); Ming C. Hammond (UC Berkeley/University of Utah), Irmgard Sinning (Heidelberg University)

Bonn, 07/2025