LYDIA HERZEL

PERSONAL INFORMATION

Office address: Takustr. 6, 14195 Berlin

Phone: +49-30-838-60266

Email: lydia.herzel@fu-berlin.de

ORCID: 0000-0001-8965-290X

EDUCATION

09/2015 **Dr. rer. nat. in Biology** (summa cum laude)
Dresden International PhD Program / TU Dresden (Germany)

01/2011 **Diploma in Biochemistry** (excellent)
University of Tübingen (Germany)

STAGES OF ACADEMIC CAREER & RESEARCH EXPERIENCE

Since 06/23 **W1 TT W2 Juniorprofessor at Freie Universität Berlin**
Department of Biology, Chemistry, Pharmacy
Institute for Chemistry and Biochemistry

03/22 - 05/23 **Postdoctoral researcher at University Medical Center Göttingen**
Molecular Biology department
Group of Prof. Dr. Markus Bohnsack

07/16 - 12/21 **Postdoctoral associate at Massachusetts Institute of Technology (MIT)**
Biology department
Group of Prof. Gene-Wei Li, PhD

10/15 - 06/16 **Postdoctoral associate at Yale University**
Molecular Biophysics and Biochemistry department
Group of Prof. Karla M. Neugebauer, PhD

06/11 - 09/15 **Graduate study at the Max Planck Institute of Molecular Cell Biology and Genetics (MPI-CBG) and Yale University**
Supervisor: Prof. Karla M. Neugebauer, PhD
Thesis title: ”Co-transcriptional splicing in two yeasts”

05/10 - 10/10 **Diploma thesis at Harvard Medical School**
Supervisor: Prof. Charles J. Weitz, MD, PhD
Thesis title: ”Biochemistry of circadian clocks - 24 hour high-resolution analysis of clock gene expression and isolation of cytoplasmic PERIOD 2 complexes”

2009 **Student assistant at the Center for Plant Molecular Biology (ZMBP) of the University of Tübingen**
6 months
Supervisor: Prof. Dr. Rita Gross-Hardt

RECOGNITION

2018	Infinite Kilometer Award to recognize the outstanding contributions made by postdoctoral researchers and research staff at MIT
2017	Personal grant by the Helen Hay Whitney Foundation (3-year postdoctoral fellowship)
2017	Personal grant by the Deutsche Forschungsgemeinschaft (DFG, 2-year postdoctoral fellowship, declined)
2015	Best poster award at the Annual Yale Department of Molecular Biophysics & Biochemistry Retreat
2013	Travel award Dresden International Graduate School for Biomedicine and Bioengineering
2012	Travel grant for the EMBO Conference "Gene Transcription in Yeast"
2012	Travel grant for the COST (Cooperation in Science and Technology) Training School on Next Generation Sequencing
2011	Max Planck Society PhD stipend
2010	5 month stipend and travel grant of the German Academic Exchange Service to work on the diploma thesis at the Harvard Medical School (Boston, USA)

TEACHING ACTIVITIES

SS 24	Advanced Biochemistry I: lecture + seminar "Complex, but precise bacterial gene expression" for master students in Biochemistry, FU Berlin
WS 23/24	Biochemistry II (metabolism & regulation): 4 lectures + seminars for bachelor students in Biochemistry, FU Berlin
WS 23/24	Enzyme models lecture for master students in Molecular Medicine, Charité Berlin
WS 23/24	Lecture & hands-on practical for high school students in the program "NATürlich Studium", NATlab FU Berlin
2018	Guest lecture "Kinetics of RNA splicing from sequencing nascent RNA" at MIT undergraduate course 7.09 "Quantitative & Computational Biology" taught by Prof. Chris Burge and Prof. Gene-Wei Li
2018	Completion of the Kaufman Teaching Certificate Program at MIT
2006 - 2008	Teaching Assistant "Chemistry and Biochemistry" for medical students at the University of Tübingen (recitation, practical course, premedical exam preparation)

PUBLICATIONS

2024 The spliceosome impacts morphogenesis in the human fungal pathogen *Candida albicans*.
Lash E, Maufrais C, Janbon G, Robbins N, **Herzel L***, Cowen LE*.
mBio. 2024 Jul 9, *co-corresponding authors
PMID:38980041

2024 Co-transcriptional gene regulation: common ground across eukaryotes and prokaryotes.
Shine M, Gordon J, Schärfen L, Zigackova D, **Herzel L***, and Neugebauer KM*.
Nat Rev Mol Cell Biol. 2024 Mar 20, *co-corresponding authors
PMID:38509203

2023 N2-methylguanosine modifications on human tRNAs and snRNA U6 are important for cell proliferation, protein translation and pre-mRNA splicing.
Wang C, Ulryck N, **Herzel L**, Pythoud N, Kleiber N, Guérineau V, Jactel V, Moritz C, Bohnsack MT, Carapito C, Touboul D, Bohnsack KE, Graille M
Nucleic Acids Res. 2023 Jun 7
PMID:37283053

2022 Ubiquitous mRNA decay fragments in *E. coli* redefine the functional transcriptome.
Herzel L, Stanley JA, Yao CC, Li GW
Nucleic Acids Research. 2022 May 7
PMID:35524564

2020 Widespread Transcriptional Readthrough Caused by Nab2 Depletion Leads to Chimeric Transcripts with Retained Introns.
Alpert T, Straube K, Carrillo Oesterreich F, **Herzel L**, Neugebauer KM
Cell Reports. 2020 Oct 27
PMID:33113357

2018 Long-read sequencing of *S. pombe* nascent RNA reveals coupling among RNA processing events.
Herzel L, Straube K, Neugebauer KM
Genome Research. 2018 Jun 14
PMID:29903723

2018 Evolutionary Convergence of Pathway-Specific Enzyme Expression Stoichiometry.
Lalanne JB, Taggart JC, Guo MS, **Herzel L**, Schieler A, Li GW
Cell. 2018 Mar 23
PMID:29606352

2017 Splicing and transcription touch base: co-transcriptional spliceosome assembly and function.
Herzel L*, Ottoz DSM*, Alpert T, Neugebauer KM
Nat Rev Mol Cell Biol. 2017 Oct 18, * co-first authors
PMID:28792005

2017 Dynamic RNA-protein interactions underlie the zebrafish maternal-to-zygotic transition.
Despic V, Dejung M, Gu M, Krishnan J, Zhang J, **Herzel L**, Straube K, Gerstein MB, Butter F, Neugebauer KM

Genome Research. 2017 Apr 5
PMID:28381614

2016 Perfect timing: splicing and transcription rates in living cells.
Alpert T, **Herzel L** and Neugebauer KM
WIREs RNA. 2016 Nov 21
PMID:27873472

2016 Splicing of nascent RNA coincides with intron exit from RNA polymerase II.
Carrillo Oesterreich F*, **Herzel L***, Straube K, Hujer K, Howard J, and Neugebauer KM
Cell. 2016 Mar 24, * co-first authors, listed alphabetically
PMID:27020755

2015 Quantification of co-transcriptional splicing from RNA-Seq data.
Herzel L, Neugebauer KM
Methods. 2015 Apr 27
PMID:25929182

2013 Counting on co-transcriptional splicing.
Brugiolo M*, **Herzel L***, Neugebauer KM
F1000Prime Rep. 2013 Apr 2, * co-first authors, listed alphabetically
PMID:23638305

Berlin, July 25, 2024