

LYDIA HERZEL

PERSONAL INFORMATION

Office address: Takustr. 6, 14195 Berlin
Phone: +49-30-838-60266
Email: lydia.herzel@fu-berlin.de
Links: Google Scholar, ORCID

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)

RESEARCH EXPERIENCE

Since 06/23 **Assistant professor 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"

HONORS, AWARDS AND FELLOWSHIPS

- 2018 Infinite Kilometer Award to recognize the outstanding contributions made by postdoctoral researchers and research staff at MIT
- 2017 Postdoctoral fellowship awarded by the Helen Hay Whitney Foundation (3.5% acceptance rate)
- 2017 Finalist for a postdoctoral fellowship awarded by the Life Sciences Research Foundation (LSRF, 5% of applicants chosen as finalists, declined)
- 2017 Postdoctoral fellowship awarded by the Deutsche Forschungsgemeinschaft (DFG, 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, SUPERVISION AND MENTORING EXPERIENCE

- 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
- 2012 - 2021 Supervision of 14 first year PhD students in their lab rotations in the Karla Neugebauer and Gene-Wei Li labs at the MPI-CBG/TU Dresden, Yale University and MIT
- 2017 - 2019 Supervision and mentoring of 2 MIT undergraduate student in lab as part of the "Undergraduate Research Opportunities Program" at MIT
- 2008 Teaching Assistant for the preparation of the preliminary medical examination in Biochemistry for medical students at the University of Tübingen (recitation)
- 2006 - 2008 Two terms Teaching Assistant "Chemistry and Biochemistry" for medical students at the University of Tübingen (recitation and practical course)

PUBLICATIONS

First author publications

- 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
- 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
- 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
- 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

Further publications

- 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
- 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 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 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

Berlin, June 16, 2023