

Lorenz Adlung

Dr. rer. nat.

University Medical Center Hamburg-Eppendorf
 Martinistr. 52
 D-20246 Hamburg, Germany
 🌐 lorenzadlung.com
 ✉ info@lorenzadlung.com
 born on May 22, 1989 in Erfurt, Germany

Scientific career

Independent Junior Group Leader

since 07/2021 **University Medical Center Hamburg-Eppendorf (UKE)**, Hamburg, Germany, I. Medical Clinic and Polyclinic & Hamburg Center for Translational Immunology (HCTI).

Post-doctoral studies

- 06/2019–05/2021 **Weizmann Institute of Science**, Rehovot, Israel, Elinav Lab & Amit Lab, Heads: Prof. Dr. Eran Elinav & Prof. Dr. Ido Amit.
- 10/2017–05/2019 **Weizmann Institute of Science**, Rehovot, Israel, Amit Lab & Elinav Lab, Heads: Prof. Dr. Ido Amit & Prof. Dr. Eran Elinav.
- 06/2017–08/2017 **German Cancer Research Center (DKFZ)**, Heidelberg, Germany, Division of Systems Biology of Signal Transduction, Head: Prof. Dr. Ursula Klingmüller.

Doctoral studies

- 10/2012–05/2017 **German Cancer Research Center (DKFZ), and Combined Faculties for the Natural Sciences and for Mathematics at Heidelberg University**, Heidelberg, Germany, Final Grade: 1.0 (*summa cum laude*), Division of Systems Biology of Signal Transduction, Head: Prof. Dr. Ursula Klingmüller.
- Thesis title *Identification of regulatory mechanisms controlling signal processing in erythroid progenitor cells using mathematical modeling*
- Appraisers Prof. Dr. Ursula Klingmüller, Prof. Dr. Thomas Höfer
- Thesis grade 1.0

Master studies

- 10/2010–09/2012 **Molecular Biosciences, Major Systems Biology, at Heidelberg University**, Heidelberg, Germany, Final Grade: 1.1.
- Thesis title *Quantitative Analysis of Erythroid Progenitors at the Single-Cell Level*
- Appraisers Prof. Dr. Ursula Klingmüller, Prof. Dr. Thomas Höfer
- Thesis grade 1.0

Bachelor studies

- 10/2007–07/2010 **Biology, at Heidelberg University**, Heidelberg, Germany, Final Grade: 1.3.
- Thesis title *Dependence of E. coli chemotaxis on CheB phosphorylation in silico and in vivo*
- Appraiser Prof. Dr. Victor Sourjik
- Thesis grade 1.0

Admission to university

- 06/2007 **Albert-Schweitzer-Gymnasium Erfurt**, boarding school specialized in mathematics and science, Erfurt, Germany, Final Grade: 1.3.

Awards and fellowships

- 08/2020–08/2021 **Robert Bosch Stiftung**, Support of Science Communication - Corona and beyond: EUR 3,000.00. Stuttgart, Germany
- 06/2019–05/2021 **Marie Skłodowska-Curie Actions**, Individual Fellowship: EUR 173,464.32 for 24 months. Horizon 2020 research and innovation programme, European Union
- 11/2017–05/2019 **Minerva Stiftung, Max-Planck-Gesellschaft**, Minerva Fellowship. Weizmann Institute of Science, Rehovot, Israel
- 07/2018 **Gips-Schüle-Nachwuchspreis**, First Prize, EUR 10,000.00 Young Investigators Award. Gips-Schüle-Stiftung, Stuttgart, Germany

- 10/2017–11/2017 **Feinberg Graduate School, Postdoctoral Fellowship.**
Weizmann Institute of Science, Rehovot, Israel
- 08/2017 **Elevator pitch: From protein abundance in patient samples to predictions of proliferation, EUR 5,000.00 seed funding.**
DKFZ-Bayer Strategic Alliance, Heidelberg, Germany
- 12/2016 **EIPOD Postdoctoral Fellowship.**
European Molecular Biology Laboratory (EMBL). Gratefully declined
- 11/2013 **iGEM Team Heidelberg 2013 Adviser, International Genetically Engineered Machine Competition Undergraduate Section, Massachusetts Institute of Technology, Cambridge, MA, USA.**
Grand Prize
- 10/2012–10/2015 **Helmholtz International Graduate School for Cancer Research, Graduate School Fellowship.**
German Cancer Research Center (DKFZ), Heidelberg, Germany
- 07/2012 **Prize for Students' Commitment, Faculty of Biosciences, Heidelberg University, Heidelberg, Germany.**
Special Prize
- 06/2012 **iGEM Team Heidelberg LSL 2012 Adviser, International Genetically Engineered Machine Competition High-School Division, Greenfield, IN, USA.**
Grand Prize plus five special prizes
- 11/2010 **iGEM Team Heidelberg 2010 Member, International Genetically Engineered Machine Competition, Massachusetts Institute of Technology, Cambridge, MA, USA.**
Gold Award
- 07/2010 **Bachelor Poster Prize, Faculty of Biosciences, Heidelberg University, Heidelberg, Germany.**
1st Prize
- 07/2009–09/2012 **Studienstiftung des deutschen Volkes e.V., Fellowship.**
- 2007, 2009 **Stiftung EVOLUTION.**
Sponsorship Award
- 2007 **BundesUmweltWettbewerb II.**
Sponsorship Award
- 2006, 2007 **Jugend forscht, Thuringia.**
2nd Prize and Winner of regional competition

Conference talks

- 08/2020 **DEF CON Red Team Village, Las Vegas, NV, USA, Briefings with Noa Perach Novogroder.**
Back to the future: Computer science and systems biology
- 07/2020 **Lindau Online Science Days 2020, Lindau, Germany, Selected Talk.**
- 12/2019 **XXI LIPID MEETING, Leipzig, Germany, Talk.**
- 09/2019 **BioTuring, San Diego, CA, USA, Webinar.**
Towards the Discovery of Lipid-Associated Macrophage (LAM) Cells
- 07/2019 **Communicating Science, Annual Cottrell Scholar Conference, Tucson, AZ, USA, Science Slam.**
- 12/2018 **#35c3, Chaos Communication Congress, Leipzig, Germany, Lecture.**
Hacking the Human Microbiome
- 11/2017 **10th Anniversary, International Master's Program Molecular Biosciences, Heidelberg University, Heidelberg, Germany, Invited Alumni Talk.**
- 07/2017 **TEDx Uni Heidelberg, Ideas worth spreading, Heidelberg, Germany, Keynote.**
Let's talk science - it saves lives
- 07/2014 **Revolving Stars, Shaky Grounds, Constellations of Precarious Knowledge in Art, Science and Technology, Dresden, Germany, Invited Talk and Panel Discussion.**
- 06/2013 **International PhD Student Cancer Conference, London, UK, Talk.**
- 06/2012 **Synthesis, Conference of the Federal Ministry of Education and Research (BMBF) Collaborative Research Project on Embodied Information, Berlin, Germany, Invited Talk.**

Leadership and mentoring

- 08/2018–05/2021 **International Postdoc Residence Advisor, The Weizmann Institute of Science, Rehovot, Israel.**
Offer of consultations, conflict mediation, organization of events, guide activities

- 03/2020–04/2020 **Team Leader**, Hackorona - A COVID-19 focused Hackathon hosted by in.dev in cooperation with Microsoft.
Finalist with [Viroligence](#)
- 06/2017–07/2017 **Workshop coach**, BBW ForWerts Graduate Program, Heidelberg, Germany.
How to Science Slam
- 05/2017 **Workshop coach**, Heidelberger Life-Science Lab at the German Cancer Research Center (DKFZ), Heidelberg, Germany.
Communication in Modern Biosciences
- 10/2016 **Workshop coach**, DKFZ PostDoc Retreat, Neustadt, Germany.
Science Communication
- 10/2014–04/2015 **Assigned teacher**, Heidelberg University and Bauhaus University Weimar, Germany.
“BioArts”: Media, Arts and Biotechnology
- 02/2013 **Workshop coach**, Heidelberger Life-Science Lab at the German Cancer Research Center (DKFZ), Landau, Germany.
SynBio meets Poetry
- 01/2013–11/2013 **Adviser**, iGEM Team Heidelberg 2013, International Genetically Engineered Machine Competition Undergraduate Section, Massachusetts Institute of Technology, Cambridge, MA, USA.
Philosopher’s stone
- 06/2012 **Workshop coach**, *textil* festival of young literature Thuringia, Erfurt, Germany.
SynBio meets Poetry
- 08/2011–06/2012 **Advisor**, iGEM Team Heidelberg LSL 2012, International Genetically Engineered Machine Competition High-School Division, Greenfield, IN, USA.
iGEMS – Unveil the invisible
- 2011–2012 **Pupils’ Mentor**, *support of pupils with foreign or non-academic background at school*, Ambassador and representative of the *Studienstiftung des deutschen Volkes e.V.*
- 09/2011–09/2013 **Students’ Tutor**, *Molecular Biology, Cell Biology*, Heidelberg University, Heidelberg, Germany.
- 04/2011–08/2017 **Students’ Tutor**, *Systems Biology*, Heidelberg University, Heidelberg, Germany.
- 01/2011–08/2017 **Pupils’ Mentor**, *advice of groups of pupils dealing with Synthetic Biology or Systems Biology, project supervision*, Heidelberger Life-Science Lab at the German Cancer Research Center (DKFZ), Heidelberg, Germany.
- 09/2008–02/2009 **Students’ Tutor**, *Inorganic Chemistry*, Heidelberg University, Heidelberg, Germany.

Patents

- since 10/2020 **Method of treating lipid-related disorders**, *Publication Number WO 2020/194317 A1*.
- 10/2013–10/2016 **Non-ribosomal protein synthesis pigment fusion peptides**, *Europe 13 187 133.7*.

Publications

Journal impact factor (JIF) and number of citations (cit.) as of February 7, 2022

- JIF: 9.423, cit.: 2 [L. Adlung*](#), P. Stapor*, C. Tönsing*, L. Schmiester, L.E. Schwarzmüller, L. Postawa, D. Wang, J. Timmer, U. Klingmüller, J. Hasenauer, M. Schilling: “Cell-to-cell variability in JAK2/STAT5 pathway components and cytoplasmic volumes defines survival threshold in erythroid progenitor cells”, **Cell Reports** (2021). doi: 10.1016/j.celrep.2021.109507. [Cover Story](#).
- JIF: 36.216, cit.: 27 T. Tuganbaev*, U. Mor*, S. Bashiardes, T. Liwinski, S.P. Nobs, A. Leshem, M. Dori-Bachash, C.A. Thaiss, E.Y. Pinker, K. Ratiner, [L. Adlung](#), S. Federici, C. Kleimeyer, C. Moresi, T. Yamada, Y. Cohen, X. Zhang, H. Massalha, E. Massasa, Y. Kuperman, P.A. Koni, A. Harmelin, N. Gao, S. Itzkovitz, K. Honda, H. Shapiro, E. Elinav: “Diet Diurnally Regulates Small Intestinal Microbiome-Epithelial-Immune Homeostasis and Enteritis”, **Cell** (2020), doi: 10.1016/j.cell.2020.08.027.
- JIF: 36.216, cit.: 299 D.A. Jaitin*, [L. Adlung*](#), C.A. Thaiss*, A. Weiner*, B. Li*, H. Descamps, P. Lundgren, C. Bleriot, Z. Liu, A. Deczkowska, H. Keren-Shaul, E. David, N. Zmora, S.M. Eldar, N. Lubezky, O. Shibolet, D.A. Hill, M.A. Lazar, M. Colonna, F. Ginhoux, H. Shapiro, E. Elinav, I. Amit: “Lipid-Associated Macrophages Control Metabolic Homeostasis in a Trem2-Dependent Manner”, **Cell** (2019), doi: 10.1016/j.cell.2019.05.054.

- JIF: 44.019, [L. Adlung](#), I. Amit: “From the Human Cell Atlas to dynamic immune maps in human disease”, **Nature Reviews Immunology** (2018), <https://www.nature.com/articles/s41577-018-0050-2>.
- JIF: 8.5, [L. Adlung*](#), S. Kar*, M.-C. Wagner*, B. She*, S. Chakraborty, S. Lattermann, J. Bao, M. Boerries, H. Busch, P. Wuchter, A.D. Ho, J. Timmer, M. Schilling, T. Höfer, U. Klingmüller: “Protein abundance of AKT and ERK pathway components governs cell type-specific regulation of proliferation”, **Molecular Systems Biology** (2017), doi: 10.15252/msb.20167258.
- JIF: 10.162, D. Wolf, V. Rippa, J. C. Mobarec, P. Sauer, [L. Adlung](#), P. Kolb, I. Bischofs: “The quorum sensing regulator ComA from *Bacillus subtilis* activates transcription using topologically distinct DNA motifs”, **Nucleic acids research** (2016), doi: 10.1093/nar/gkv1242.
- JIF: 5.766, A. Raue, B. Steiert, M. Schelker, C. Kreutz, T. Maiwald, H. Hass, J. Vanlier, C. Tönsing, [L. Adlung](#), R. Engesser, W. Mader, T. Heinemann, J. Hasenauer, M. Schilling, T. Höfer, E. Klipp, F. Theis, U. Klingmüller, B. Schöberl, J. Timmer: “Data2Dynamics: a modeling environment tailored to parameter estimation in dynamical systems”, **Bioinformatics** (2015), doi: 10.1093/bioinformatics/btv405.
- JIF: 4.245, M. E. Boehm*, [L. Adlung*](#), M. Schilling, S. Roth, U. Klingmüller, W. D. Lehmann: “Identification of Isoform-Specific Dynamics in Phosphorylation-Dependent STAT5 Dimerization by Quantitative Mass Spectrometry and Mathematical Modeling”, **Journal of proteome research** (2014), doi: 10.1021/pr5006923.
- JIF: 3.21, R. Beer*, K. Herbst*, N. Ignatiadis*, I. Kats*, [L. Adlung*](#), H. Meyer*, D. Niopek*, T. Christiansen, F. Georgi, N. Kurzawa, J. Meichsner, S. Rabe, A. Riedel, J. Sachs, J. Schessner, F. Schmidt, P. Walch, K. Niopek, T. Heinemann, R. Eils, B. Di Ventura: “Creating functional engineered variants of the single-module non-ribosomal peptide synthetase IndC by T domain exchange”, **Molecular BioSystems** (2014), doi: 10.1039/C3MB70594C.

Miscellaneous writing

[L. Adlung*](#), Y. Cohen*, U. Mor*, E. Elinav: “Machine learning in clinical decision making”, **Med** (2021) doi: 10.1016/j.medj.2021.04.006.

[L. Adlung](#), E. Elinav, T.F. Greten, F. Korangy: “Microbiome genomics for cancer prediction”, **Nature Cancer** (2020). doi: 10.1038/s43018-020-0059-x.

Â.P. Matos, A. Kauffman, C. Vickery, K. Naegeli, L. Strittmatter, A. Sybirna, J. van Blijswijk, [L. Adlung](#), T. Berbasova, J. Enterina, L. Eismann, B. Tierney, J. Jordi, L. Zhu, S. Verkuil, L. Tallorin, A. Wehling, M. Ogden, S. Lammel, M.K. Hasslacher, P. Wuelfroth, S. Neumann, C. Tidona, U.A.K. Betz: “Synthetic Biology Category Wins the 350th Anniversary Merck Innovation Cup”, **Trends Biotechnol** (2019), doi: 10.1016/j.tibtech.2019.10.007.

[L. Adlung](#), I. Amit, E. Elinav: “Embrace the fat when getting old”, **Aging (Albany NY)** (2019), doi: 10.18632/aging.102341.

[L. Adlung](#): “Global collaboration”, **Science** (2014), <http://www.sciencemag.org/content/346/6205/47>.

[L. Adlung](#): “Dependance of *E. coli* chemotaxis on CheB phosphorylation in silico and in vivo”, **Journal of Unsolved Questions** (2010), <http://junq.info/?p=1079>.

[L. Adlung](#): “*Konstruktion von Dreiecken aus drei speziell gegebenen Punkten*”, **Die Wurzel** (2005), <http://www.wurzel.org/zeitschrift/2005.html#Heft-06>.

* shared first-authorship

Books

[L. Adlung](#), C. Hopp, A. Köthe, N. Schnellbacher, O. Staufer: “*Tutorium Mathe für Biologen: Von Studenten für Studenten*”, **Springer Spektrum** (2014), ISBN 978-3642377853.

[L. Adlung](#), S. Baum, S. Bayram, Y. Cho, C. Hennch, I. Pötzsch, H. Schwab, T. Tsiknas: “Synbio meets Poetry: *Was passiert, wenn Synthetische Biologie auf Poesie trifft ...*”, **CreateSpace Independent Publishing Platform** (2013), ISBN 978-1492762287.