

# Prof. Dr. Chase Beisel

## Department Head

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## Education

2009	PhD, Chemical Engineering, California Institute of Technology, Pasadena, CA, USA
2004	BSc, BS, Chemical Engineering, Iowa State University, Ames, IA, USA

## Positions

2023 - present	Co-founder and Chief Scientific Officer, Leopard Biosciences, Martinsried, Germany
2021 - present	Full Professor (W3), Faculty of Medicine, University of Würzburg, Germany
2021 - present	Department Head, Helmholtz Institute for RNA-based Infection Research (HIRI), Würzburg, Germany
2019 - present	Scientific Advisory Board Member, Benson Hill, St. Louis, MO, USA
2018 - present	Director, HIRI Graduate Program "RNA & Infection"
2018 - 2021	Group Leader, Helmholtz Institute for RNA-based Infection Research (HIRI), Würzburg, Germany
2018 - 2021	Associate Professor (W2), Faculty of Medicine, University of Würzburg, Germany
2017 - 2018	Associate Professor, Department of Chemical and Biomolecular Engineering, North Carolina State University (NCSCU), Raleigh, NC, USA
2015 - present	Co-founder and Scientific Advisory Board Member, Locus Biosciences, Morrisville, NC, USA
2011 - 2017	Assistant Professor, Dept. of Chemical and Biomolecular Engineering, NCSU, Raleigh, NC, USA

## Committee Work

2024	Speaker, Topic 1, Helmholtz Centre for Infection Research (HZI), Braunschweig, Germany
2023	Co-organizer, CRISPR Conference, Würzburg, Germany
2022	Instructor, Cold Spring Harbor Laboratory Synthetic Biology Summer School, NY, USA
2020	Deputy Speaker, Topic 1, Helmholtz Centre for Infection Research, Braunschweig, Germany
2019	Organizer, International Conference on CRISPR Technologies, Würzburg, Germany

## Awards & Honors

RNA Society Mid-Career Award (2024), ERC Proof of Concept Grant (2024), University of Otago Chaffer Fellow (2023), Pettenkofer Prize (2022), Falling Walls Science Breakthrough of the Year (2021), Medical Valley Award (2020), ERC Consolidator Award (2020), AIChE Program Development Service Award (2018), D.I.C. Wang Young Investigator Award (2018), Camille Dreyfus Teacher-Scholar Award (2017), Bay Area Lyme Foundation Emerging Leader Award (2016), Sigma Xi Faculty Research Award (2016), NCSU Faculty Scholar (2015 - 2016), NSF CAREER Award (2015)

## Selected Publications

- Jiao C, Reckstadt C, König F, Homberger C, Yu J, Vogel J, Westermann AJ, Sharma CM, **Beisel CL** (2023)  
*RNA recording in single bacterial cells using reprogrammed tracrRNAs*  
**Nature Biotechnology** 41(8):1107-1116
- Dmytrenko O, Neumann GC, Hallmark T, Keiser DJ, Crowley VM, Vialletto E, Mougiakos I, (...), Begemann MB#, Jackson RN#, **Beisel CL**# (2023)  
*Cas12a2 elicits abortive infection through RNA-triggered destruction of dsDNA*  
**Nature** 613(7944):588-594
- Wimmer F\*, Mougiakos I\*, Englert F, **Beisel CL** (2022)  
*Rapid cell-free characterization of multi-subunit CRISPR effectors and transposons*  
**Molecular Cell** 82(6):1210-1224.e6
- Liao C, Sharma S\*, Svensson SL\*, Kibe A\*, Weinberg Z\*, Alkhnbashi OS, Bischler T, Backofen R, Caliskan N, Sharma CM, **Beisel CL** (2022)  
*Spacer prioritization in CRISPR-Cas9 immunity is enabled by the leader RNA*  
**Nature Microbiology** 7(4):530-541
- Jiao C, Sharma S\*, Dugar G\*, Peeck NL, Bischler T, Wimmer F, Yu Y, Barquist L, Schoen C, Kurzai O, Sharma CM#, **Beisel CL**# (2021)  
*Noncanonical crRNAs derived from host transcripts enable multiplexable RNA detection by Cas9*  
**Science** 372(6545):941-948