

# Add-on Fellows for Interdisciplinary Life Science Fourth Cohort

## Katharina Baum

Postdoc (Theoretical Biophysics) at the Max-Delbrück-Center for Molecular Medicine in Berlin in the Helmholtz-Association

Katharina Baum tracks phenotypic changes in leukemia and use *omic* data to detect changes in gene expression. She also studies metabolic fluxes in colon cancer cells. Previously, Katharina completed her doctorate in theoretical biophysics at the HU Berlin and studied mathematics also at HU Berlin and École Polytechnique in Lozère, France. After a postdoc, she is pursuing a career as a group leader at the Hasso Plattner Institute in Potsdam.



## Ann-Kristin Becker

Alumna Doctoral candidate (Bioinformatics) at the University Hospital Greifswald



Ann-Kristin Becker worked at the Institute of Bioinformatics where her research was about interpretable machine learning and its application to high-dimensional biomedical data. Prior to that, she studied mathematics in Marburg with a minor in biology. The Add-on fellowship was a great support for her and especially enabled her to visit conferences from both research fields. Ann-Kristin switched her working area and joined an organization of German business information as a Data Science Researcher.





### **Laura Bernáez Timón**

Doctoral candidate (Systems Neurosciences) at the Max-Planck-Institute (MPI) for Brain Research in Frankfurt

She grew to be an expert in imaging techniques, for example Magnetic resonance imaging, Positron-Emissions-Tomography, and 2-photon calcium imaging. Previously, Laura studied B.Sc. Biomedical Engineering at Universidad Carlos III de Madrid and M.Sc. Physics of Solids and Biological Systems at Universidad Autónoma de Madrid, both in Spain, and M.Sc. Interdisciplinary Neuroscience at Goethe University Frankfurt.

### **Gregory Born**

Alumnus Doctoral candidate (Neuroscience) at the Ludwig-Maximilian's-University of Munich



Gregory Born conducts his doctoral research on "The influence of cortico-thalamic feedback on visual spatial integration in the mouse dorsolateral geniculate nucleus". Previously, he studied psychology (B.Sc.) in Würzburg and neural and behavioral sciences (M.Sc.) at the International Max Planck Research School at the University in Tübingen. He spent time abroad at the Federal University of Rio Grande de Norte in Brazil.



### Laura Breimann

Doctoral candidate (Systems biology) at the Max-Delbrück-Center (MDC) for Molecular Medicine in Berlin in the Helmholtz-Association



Laura Breimann focused on dissecting the mechanism of dosage compensation in *C. elegans* by using imaging and image analysis tools. Through the BIMS-B-NYU exchange fellowship, she obtained her doctorate. Previously, she studied Biochemistry with a focus on gene regulation in Tübingen, Munich, and Oxford. Her passion is community building. As a doctoral representative, she pushed for a safer work environment through harassment guidelines and mental health support.

For her postdoctoral position, she will move to Boston to join the lab of Ting Wu at Harvard Medical School. She is a very active fellow and regularly supports the Fellows of the new cohorts with expertise and exchange of experiences.



### David Brückner

Alumnus Doctoral candidate (Biophysics) at the Ludwig-Maximilian's-University of Munich



David Brückner is a NOMIS Foundation Postdoctoral Fellow at the Institute of Science and Technology Austria. His research focusses on the physical principles governing complex biological systems, including cell migration, developmental systems, and chromosome dynamics. To study these systems, he develops theoretical approaches combining inference methods, biophysical models, and information theory. David studied Physics at the University of Cambridge, followed by doctoral studies in the

group of Chase Broedersz at the LMU in Munich.



**Anna-Marie Finger**

Alumna Doctoral candidate (Chronobiology) at the Charité – University Hospital Berlin



Anna-Marie Finger focuses on mechanisms of cell-cell communication between peripheral circadian oscillators that drive coherent circadian rhythmicity on the tissue level. Prior to that, received her B.Sc. Biology from the University of Virginia and her M.Sc. Molecular Medicine from the Charité. Anna-Marie genuinely enjoys promoting and connecting the next generation of scientists and has been involved in the organization of the 2021 Summer School of Circadian Sciences and Chronobiology Gordon Research Seminar (both funded by the Joachim Herz Stiftung “Begegnungszonen” program), as well as the SRBR Global Talk Series for early career researchers.

**Jonathan Fiorentino**

Alumnus Doctoral candidate (Theoretical Biophysics and Bioinformatic) at the Helmholtz-Center in Munich



Jonathan Fiorentino studied Physics and did his doctorate at Sapienza University of Rome. He worked on physical models of gene expression regulation. Afterwards, he was a postdoc at the Helmholtz-Zentrum Munich where his research focused on theoretical models and bioinformatics analyses about cell decision making in embryonic development. After that, he joined the Italian Institute of Technology, where he started working on RNA biology and RNA-protein interactions. The Add-on Fellowship allowed him to visit the experimental collaborators, to attend international conferences, to get all the equipment needed for his research and to network at Add-on Fellow meetings.



### **Ankita Garg**

Docotral candidate (Molecular Biology) at the University Hospital Hannover



Ankita Garg is focusing on RNA therapeutics from her master's to her postdoc. Currently, she strives to identify novel non-coding RNA, which modulate several pathways of cardiovascular diseases and develop them into potential therapies. Previously, she studied Biotechnology (B.Tech., M.Sc.) at the National Institute of Technology in Jalandhar and at the Indian Institute of Technology in Delhi, India. Her work requires collaborations to incorporate models such as Engineered Heart Tissues, Living Myocardial Slices, and in vivo animal models to characterize and analyze novel therapies. The Add-on Fellowship support her in establishing collaborations, advancing her knowledge and skill set.



### **Jakob Gierten**

Postdoc (Systems biology and Medicine) at the Center for Organismal Studies at the Ruprecht-Karl's-University of Heidelberg

Jakob Gierten works in pediatrics, more specifically in children's cardiology. In his dissertation, he investigated cardiac phenotypes relevant to humans using a quantitative genetic approach in the fish model system. For this, Jakob used a combination of genome-wide analyses and microscopy. Previously, he studied medicine in Hamburg, Heidelberg and Paris. He completed his practical training at the Karlsruhe Institute of Technology.

**Roman Herzog**

Alumnus Doctoral candidate (Molecular biology) at the Ludwig-Maximilian's-University of Munich

Roman Herzog is an expert in RNA-sequencing, protein expression analysis and mass spectrometry and is doing research on cholera, specifically on "Characterization of a novel Quorum sensing pathway in *Vibrio cholerae*". Previously, he studied biology and chemistry on a teaching degree and molecular biology in the M.Sc. program at LMU Munich. After completing his doctorate, his career led him to work as a project manager for the world market leader for service offerings in analytical methods in environment and food and later as a scientist Eurofins and later as a scientist for a biotechnology company in Bavaria.

**Martin Hölzer**

Postdoc (Bioinformatics) at the Friedrich-Schiller-University of Jena



Martin Hölzer is a trained bioinformatician who works a lot with all kinds of sequencing data (the longer, the better) to unlock the secrets of biology. He studied at the Friedrich-Schiller-University of Jena, then he went to the European Bioinformatics Institute near Cambridge and is now continuing his academic journey at the Robert Koch Institute in Berlin. At the Robert Koch Institute he is deputy head of the Bioinformatics unit and responsible for research around real-time nanopore sequencing, rapid detection of pathogens and microbial evolution – “certainly”, Martin says, “thanks to the support of the Joachim Herz Foundation”.



### **Marius Lange**

Docotral candidate (Bioinformatics) at Helmholtz Center in Munich



Marius Lange is an applied mathematician, working at the interface of machine learning and molecular biology. In his research, he develops computational methods that describe continuous biological processes, such as development, regeneration or reprogramming, through the lens of single-cell genomics. For example, he developed CellRank, a toolkit that leverages RNA velocity to reconstruct cellular fate decisions. In the past, he studied physics and applied math at the universities of Freiburg,

London and Oxford. Thanks to the Joachim Herz Foundation, he was able to spend 3 months each in the labs of Dana Pe'er at in New York and of Mor Nitzan at the Hebrew University of Jerusalem.



### **Benjamin Maier**

Doctoral candidate (Systems biology) at the Robert-Koch-Institute in Berlin

Benjamin Maier researches the spread of infectious diseases primarily in temporally resolved face-to-face contact networks. In addition to his research, he is a member of the student council and is proficient in a variety of computer languages and operating systems. Previously, he studied physics in B.Sc. and M.Sc. at HU Berlin. Benjamin followed up with a postdoc at the Robert Koch Institute.



### **Felicia Maull**

Docotral candidate (Neuroscience) at the University Hospital Mainz



Felicia Dietsche's (née Maull) vita is influenced by two major interests: the fascination for natural sciences and the passion for language. Following her interest in science, she studied biomedicine and is currently working in basic molecular research. Yet, during her studies and while pursuing her doctorate, she never lost her enthusiasm for communication. As an intern, she worked at a radio station and in the editorial office of popular science magazines like GEO WISSEN and GEO WISSEN GESUNDHEIT. She strongly believes that science and communication need not be separated fields but should go hand in hand.



### **Ewa Sitarska**

Alumna Doctoral candidate (Biophysics) at the European Molecular Biology Laboratory (EMBL) in Heidelberg



Ewa Sitarska investigated the mechanobiology of the plasma membrane. In particular, she focuses on curvature-sensitive proteins and the complex interplay between the cell surface, the membrane trafficking machinery and the cytoskeletal networks that power cell migration and determine cell shape. She uses a wide range biophysical, biochemical and cell biology methods, from breeding and control of cell lines, the genetic scissors CRISPR/Cas9, flow cytometry, sequencing techniques, advanced microscopy techniques to Atomic Force Spectroscopy and Nuclear Magnetic Resonance spectroscopy. Previously, Ewa studied biotechnology (B.Sc. and M.Sc.) and psychology (M.Sc.) at the University of Warsaw (Poland) with a research stay at the UT Southwestern Medical Center (USA).

**Erika Urdaneta**

Alumna Doctoral candidate (Infection biology) at the Humboldt-University Berlin

Erika Urdaneta research RNA-protein interaction in bacterial infections and in blood parasites. She engaged as a teaching assistant and research assistant in cell biology and biochemistry and immunology of blood parasites at Universidad Simon Bolivar in Caracas, Venezuela. She previously completed her M.Sc. in biological sciences at the same university. After her postdoctoral career at HU Berlin, she joined the biotechnology company 10x Genomics.

**Johannes Zierenberg**

Postdoc (Statistical Physics and Neurosciences) at the Max Planck Institute (MPI) for Dynamics and Self-Organization in Göttingen



Johannes Zierenberg studies stochastic processes in complex networks with a focus on information processing in neural networks and epidemic spread. His approach builds on experimental data to constrain numerical models and to derive analytical theories if possible. Of particular interest are emergent phenomena in the vicinity of (non-equilibrium) phase transitions, which goes back to his training in theoretical physics at the University of Leipzig where he received his doctorate.



**Marietta Zille**

Alumna Postdoc (Neuroscience) at the Fraunhofer Research Institution for Marine Biotechnology and Cell Engineering in Lübeck



Marietta Zille is a medical neuroscientist and has dedicated her career to studying the etiology, pathophysiology, and therapy of neurodegeneration, cerebrovascular disease, and brain aging. She enjoys the reputation of an internationally visible expert in cell death signaling having characterized the signaling pathways leading to neuronal demise after stroke. Marietta worked as a postdoc at Cornell University, USA, and at the Fraunhofer Institute for Marine Biotechnology and Cell Technology. Previously, she studied biology in Cologne, medical neuroscience in Berlin and received her doctorate from the Charité. She got the professorship at the University of Vienna. She is a very active alumna and regularly supports the Fellows of the new cohorts with expertise and exchange of experiences.

**Vera Zizka**

Doctoral candidate (Aquatic Ecosystem Research) at the University of Duisburg-Essen

Vera Zizka uses the metabarcoding method to analyze the biodiversity of aquatic ecosystems. She is very involved in teaching and benefited from several research stays at the Australian Tropical Herbarium in Cairns, Australia, and in Marine and Arctic Ecology at the University of Tromsø, Norway. She studied biological sciences, ecology and evolution in Frankfurt, Germany. Upon receiving her PhD, Vera moved to the Natural History and Zoological Research Museum Alexander Koenig in Bonn, Germany, in the Department of Biodiversity Monitoring.

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