POSTDOC YEARLY REVIEW 2019



European Research Council 5 years - 1,55 million€

"Naked mole-rats to mice: metabolic reprogramming to prevent ischaemic injury."

Jane Reznick



Deutsche Krebshilfe 3 years - 465.000€

"Analyse und Störung des Crosstalks zwischen GOF mutantem p53, Wnt/ P-Catenin und Pi3-Kinase in Brustkrebs.

Kamil Lisek



Marie Curie Fellowship 2 years - 159.460€ "VOLIV : Role of volume-

regulated anion channels in liver physiology and metabolism.'

Sandy Blin

Grants

Publications



"Multiscale modeling of dyadic structure-function relation in ventricular cardiac myocytes."

Biophys J

Wolfgang Giese



"Degradation and remobilization of endogenous retroviruses by recombination during the earliest stages of a germ-line invasion."

Proc Natl Acad Sci U S A 115 Ulrike Löber ^{(34): 8609-8614}



"DCAF8, a novel MuRF1 interaction partner, promotes muscle atrophy."

J Cell Sci 132 (17): jcs233395

Benjamin Sünkel

"Associations of the metabolic syndrome and its components with cognitive impairment in older adults."

BMC Geriatr 19 (1): 77

"Exploring the dietmicrobiota axis for immunomodulation and organ protection in hypertension Hyperbiota."

5 years - 1,5 million€

European Research Council

Nicola Wilck



"Deciphering the role of novel mitochondrial microproteins in

the human heart." Sebastian van Heesch



ECRT Research Grant 3 years - PhD student salary

"Organoid disease models for spinal muscular atrophy.

Angelica Garcia-Perez



"Comprehensive gene expression meta-analysis identifies signature genes that distinguish microglia from peripheral monocytes/ macrophages in health and glioma."

Acta Neuropathol Commun 7 (1):20

"Transcriptional heterogeneity of fibroblasts is a hallmark of the aging heart." JCI Insight 4 (22): e131092

Ramon Oliveira Vidal



Cartography." Nature 576, 132-137

"Gene Expression

Nikolaos Karaiskos



"Evolution of Replication **Origins in Vertebrate** Genomes: Rapid Turnover **Despite Selective** Constraints."

Nucleic Acids Res 47 (10):

"The translation Landscape of

Florian Massip



the Human Heart." Cell 178 (1): 242-260

Sebastian van Heesch

MAX DELBRÜCK CENTER FOR MOLECULAR MEDICINE IN THE HELMHOLTZ ASSOCIATION



DZHK Excellence Program **Promotion of Women** Scientists 1 year - 60.000€

"Dynamic of endothelial cadhesome in angiogenesis."

Anna Szymborska-Mell



FEBS Fellowship 1 vear - 36.486€

"Mechanisms of gene expression regulated by 3D genome topology."

Ibai Azcarate



"Of gene expression and cell division time: A mathematical framework for advanced differential gene expression and data analysis."

Cell Sys. 2019 Sep 25

Analysis of correlation-based biomolecular networks from different omics data by fitting stochastic block models

F1000Res 8: 465

Katharina Baum



"FLAM-seq: full-length mRNA sequencing reveals principles of poly(A) tail length control."

Nat Methods 16 (9): 879-886

Ivano Legnini



"53BP1 Supports Immunoglobulin Class Switch Recombination Independently of Its DNA Double-Strand **Break End Protection** Function." Cell Rep 28 (6): 1389-1399

Devakumar Sundaravinayagam



"Live-Cell Structural Biology to Solve Biological Mechanisms: The Case of the Exocyst."

Structure 27, 132-137

Ibai Azcarate



"Artery-vein specification in the zebrafish trunk is prepatterned by heterogeneous Notch activity and balanced by flow-mediated fine tuning." Development 146 (16): dev.181024

Baptiste Coxam



POSTDOC YEARLY REVIEW 2019



Postdoc Day 2019

In 2019 the organizers from the Postdoc Association of the Max Delbrück Center for Molecular Medicine (MDC) and the Leibniz- Forschungsinstitut für Molekulare Pharmakologie (FMP) welcomed participants at the newly opened Berlin Institute for Medical Systems Biology (BIMSB).



80 postdocs and PhD students from 11 institutes based in Berlin and Brandenburg used this opportunity to exchange professional knowledge and help each other with their career planning. The event was also attended by members of the Max Planck Institute for Molecular Genetics, Charité, the Institute of Biochemistry at Freie Universität Berlin, and the Leibniz Institute of Freshwater Ecology and Inland Fisheries.

Our keynote speaker was Professor Nenad Ban, a professor of structural molecular biology at the ETH Zurich (Swiss Federal Institute of Technology). Structural studies in his group on bacterial and eukaryotic ribosomes and their functional complexes have provided fundamental insights into the process of protein synthesis in all kingdoms of life. The keynote speech was entitled "Visualising the Invisible".



"A fantastic event of interactive workshops, inspiring lectures, and enlightening discussions." (Prof. Nenad Ban)

Winners

Best talk:

1st prize: **Rukeia El-Athman**, Final year PhD sudent, Charité/FU/HU "A landscape of circadian and ultradian alternative splicing events in mammalian tissues."

2nd prize: **Marie Walde**, Postdoc, MDC "Image global, detect local."

3rd prize: **Michael Robson**, Postdoc, MPImg "Compartmentalisation insulates gene expression during embryogenesis."

Best poster:

Warren Winick-Ng, MDC

"In situ genome architecture mapping of targeted cell types in the brain."

Lucille Alonso, Charité – Universitätsmedizin Berlin "The role of brain serotonin in social and cognitive abilities in rats: lessons from tryptophan hydroxylase 2-deficient rats."

Michael Erbner, FMP

"Elucidation of Molecular Mechanisms that couple Phosphoinositide Signaling to Lysosomal Transport."

Ana Miguel Fernandes, MDC

"RNA polymerase II promoter escape contributes to circular RNA formation."

Uira Melo, Max Planck Institute for Molecular Genetics (MPImg) "Chromosome conformation capture (Hi-C) combined with wholegenome sequencing for the detection and functional interpretation of complex genomic rearrangements in developmental disease."

Outlook 2020

The Postdoc Day 2020 will take place at MDC campus Buch on May 15th, 2020.

Prof. Charpentier will share with us new insights about CRISPR/Cas and Prof. Ganten, will discuss his very interesting career from scientist to president of the World Health Summit. We are looking forward to offer more workshops, invite interesting guests, and welcome even more postdocs from Berlin and beyond. Join us!



Professor Emmanuelle Charpentier Founding, Scientific and Managing Director of the Max Planck Unit for the Science of Pathogens, Berlin

Professor Detlev Ganten

Founding President of the World Health Summit, Chairman of the Foundation Board of the Charité Foundation and editor of the Journal of Molecular Medicine

postdoc-day.mdc-berlin.de

POSTDOC YEARLY REVIEW 2019

Career Pathways

In this series of talks, professionals from both industry and academia share their work experiences. In 2019, four of such talks took place in campus Buch. All of them elicited much interest among the post-docs. Below is the overview of the speakers and topics:

Tiago Lopes (Associate researcher, Uni of Wisconsin / Guest researcher, the University of Tokyo), "A long commute: I live in Tokyo and work in the US (and still do great science)"

Dr. Uta Baddack-Werncke (National Contact Point Health for Horizon 2020/ Deutsches Zentrum für Luft- und Raumfahrt e.V.), "A career option for biomedical scientists out of the lab: Health Research Funding bodies"

Dr. Andrea Zobel (Senior Director PAREXCEL Academy / Global Head of PAREXCEL Academy), "From Lab to Last Mile: My career followed the drug development process""

Dr. Ulrike Pannasch (Wissenschaftskolleg zu Berlin / Institute for Advanced Study, Academic Coordinator, College for Life Sciences), "Changing sides: From basic research to scientific career support"

Pizza Lunches

Pizza Lunch talks are organised by the MDC Postdoctoral Association with the aim of providing postdocs with opportunities to learn and discuss options for an academic career, to network and of course enjoy some pizza. In 2019, the following two talks took place:"

Dr. Martha Sommer

Group leader at the Charité and a Delbrück Fellow of the Berlin Institute of Health (BIH)

Elena Martins

Research funding advisor of the Leibniz Association (ERC grants)

Postdoc to PhD Mentoring

"Postdoc-to-PhD mentoring is the initiative that connects doctoral students (mentees) who need support in identifying and developing the skills that will help them to advance in their careers with experienced postdoc researchers (mentors). In the course of one year, they work together in tandems and meet regularly to discuss a variety of issues pertinent to mentees' personal scientific progress. Apart from one-on-one meetings, both mentors and mentees arrange peer group meetings, during which they exchange their experience with the mentoring process."

"Currently, there are 13 mentoring tandems, 7 of them cross-campus (Mitte - Buch). The intermediate evaluation of the program revealed that in majority of the cases, both mentors and mentees are satisfied with the way their pairs were matched and find the program very helpful for their personal development. It is clear that the pilot run justifies a second round, which will commence in 2020.

"The mentoring program is a valuable puzzle piece of my PhD phase, thank you!" (mentee) "Great program, I enjoy being part of it and having a mentor." (mentee) "I really liked the start day / workshop." (mentee)



Career Pathways Speakers for 2020:

February **Dr. Mireille Starke** *Clinical scientist from Mologen AG*

April Claus Melder Senior Vice-President at Sick AG in Waldkirch

June **Dr. Tetiana Kosten** *Consultant at Roland Berger*



Pizza Lunch Speakers for 2020:

January **Dr. Agnieszka Rybak-Wolf** *Group leader of the MDC organoid platform*

March

Dr. Fan Liu

Group leader for Structural Interactomics and head of the proteomics research platform at FMP

June

Dr. Severine Kunz Senior Postdoc in t electron microscopy facility

Impressum

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