BUILDING BRIDGES

VIENNA BIOCENTER
PHD SYMPOSIUM
4th-5th of November
2021
As happy as we are to partially host this symposium on-site, we are still obligated to inform you about the current COVID-19 regulations that we have to obey to make this event as safe as possible. According to the governmental regulations, every person on site has to be vaccinated twice or has to have recovered from COVID-19 in the past 6 months. In addition, we expect everyone to be tested with a PCR test not older than 48h. Following these measurements, we are excited to be able to hold this symposium almost as we were used to and not to have to skip our in person coffee break meetings and most importantly our famous symposium party!
Thursday, 4th of November

Session I: Immunology & Cancer

09:00 Opening remarks
09:20 Jane Oliaro – Peter Mac, AUS
“Mechanisms of tumour immune evasion and implications for immunotherapy”
10:00 Anne Rios – Princess Máxima Center, NL
“Spatio-phenotypic patterning of millions of cells within tissues”
10:40 Hedda Wardemann – DKFZ, DE
“Evolution of the human immune response to a complex pathogen”
11:20 Lunch break

Session II: Biochemistry & Biophysics

12:30 Ana García-Sáez – CECAD, DE
“Shedding new light on mitochondrial permeabilization during apoptosis”
13:10 Lori Passmore – LMB, UK
“An integrative structural biology approach to understand DNA crosslink repair”
13:50 Brenda Schulman – MPI, DE
“Strategies for substrate recognition by E3 ubiquitin ligases”
14:30 Coffee break

15:00 Career workshops I
16:00 Career workshops II
17:00 Award ceremonies
Friday, 5th of November

09:00  Career workshops I
10:00  Career workshops II
11:00  Virtual poster session
12:00  Lunch break

Session III: Industry

13:00  Philipp Kukura – Refeyn, UK
“Revealing the physicochemical basis of biomolecular interactions with mass photometry”
13:40  Florian Jupe – Bayer, DE
“Shaping Agriculture at Bayer Crop Science R&D”
14:20  Sebastian Carotta – Boehringer Ingelheim, AUT
“Basic and translational immunology research in academia and industry”
15:00  Coffee break

Session IV: Development & Neuroscience

15:30  Barbara Treulein – ETH, CH
“Tracing and perturbing lineages during human brain organoid development”
16:10  Rita Sousa-Nunes – King’s College London, UK
“Neural stem cells alter nucleocytoplasmic partitioning and accumulate nuclear polyadenylated transcripts during quiescence”
16:50  Emma Farley – UCSD, US
“Affinity optimizing mutations within cardiac enhancers disrupt heart development”
17:45  Added dimension talk
18:45  Dinner and party
Immunotherapies that enhance cytotoxic lymphocyte activity against tumour cells have revolutionised modern cancer treatment. A limitation to these approaches is that the number and functionality of lymphocytes can vary significantly within tumors, leading to variation in the proportion of patients who respond positively to immunotherapy. Furthermore, intrinsic or acquired genetic mutations can determine the sensitivity or resistance of tumours to immunotherapy approaches such as checkpoint blockade and adoptive cell therapy. Here, we have applied CRISPR-based genetic screening approaches to uncover mechanisms of tumor immune evasion. Our results highlight a role for TNF-mediated bystander killing as a potent cytotoxic lymphocyte effector mechanism that can be enhanced by a class of drugs, called smac-mimetics, that sensitize tumour cells to TNF-induced cell death. Indeed, we showed that the smac-mimetic, birinapant, significantly enhances CAR-T cell therapy in a solid tumour model. The data generated has also identified new genes and pathways that may predict response to treatment or be therapeutically targeted to improve the number of patients that benefit from immunotherapy.

3D imaging is essential to visualize the complex cellular composition of large tissues. Despite advances in image processing, no scalable approach exists for detailed cellular profiling of all cells within large 3D human tissue that fully takes into account morphology and configuration of the many cell types present. Here, we show eight-color mLSR-3D imaging combined with STAPL-3D for parallelized, deep learning enabled single-cell segmentation. We extracted molecular, spatial and morphological features of millions of cells and uncovered the spatio-phenotypic patterning of pediatric Wilms Tumor. Population profiling and pseudotime ordering revealed a highly disorganized spatial pattern in WT compared to healthy fetal kidney, yet cellular organisation could be matched to fetal cells. In addition, we identified previously unreported tumor-specific populations, uniquely characterized by their spatial embedding or novel morphological attributes. Our results demonstrate the potential of in situ single-cell profiling offered through mLSR-3D and STAPL-3D to generate a comprehensive cellular map of human tumors.
Apoptotic cell death is essential for development, immune function or tissue homeostasis, and it is often deregulated in disease. Mitochondrial outer membrane permeabilization (MOMP) is mediated by BAX and BAK oligomers and plays a role central in apoptosis execution. Knowing the architecture of the macromolecular machineries mediating MOMP is crucial for understanding their function and for the clinical use of apoptosis. During oligomerization, Bax dimers form distinct line, arc and ring assemblies at specific apoptotic foci to mediate MOMP. However, the molecular structure and mechanisms controlling the spatiotemporal formation and range of action of the apoptotic foci are missing. Although it is widely accepted that Bax and Bak function and molecular mechanism at apoptotic foci largely overlap, there is limited evidence how Bak works. Here I present our latest discoveries in the molecular similitudes and differences between Bax and Bak in apoptosis.
Lori Passmore

An integrative structural biology approach to understand DNA crosslink repair

The Fanconi Anemia (FA) pathway repairs DNA damage caused by endogenous and chemotherapy-induced DNA crosslinks, and responds to replication stress. Genetic inactivation of this pathway impairs development, results in bone marrow failure and promotes cancer. The key molecular step in the FA pathway is the monoubiquitination of FANCD2-FANCI by the FA core complex - a megadalton multiprotein E3 ubiquitin ligase. Monoubiquitinated FANCD2 is thought to recruit enzymes to remove the DNA crosslink or to stabilize the stalled replication fork. We recently reconstituted an active, recombinant FA core complex that efficiently monoubiquitnates FANCD2-FANCI in vitro and used electron cryo-microscopy (cryoEM) alongside mass spectrometry to determine the structures of several complexes. I will describe our efforts to understand how the proteins in the FA pathway signal and repair DNA crosslinks.

Brenda Schulman

Strategies for substrate recognition by E3 ubiquitin ligases

A predominant form of eukaryotic regulation involves the dynamic linkage and removal of ubiquitin (and structurally-related ubiquitin-like proteins, UBLs) to control the half-lives, subcellular location, conformation, and other properties of most intracellular proteins. The specificity of ubiquitylation depends on a vast collection of E3 ligase enzymes that modify particular protein substrates at the right time and place in a cell. To understand this regulation, we combine in vitro biochemistry, biophysics, structural biology, chemistry, mammalian cell-culture assays and/or yeast genetics in an integrated and circular process, with continuous flow of information between methods to decipher intricate biological regulation. I will present the latest data from our lab shedding light on mechanisms of E3 ligase-mediated ubiquitylation, with a focus on how biological regulation is achieved.
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Interactions between biomolecules control the processes of life in health, and their malfunction in disease, making their characterization and quantification essential to our understanding of the underlying molecular mechanisms. I will introduce mass photometry, the accurate mass measurement of individual molecules in solution by light scattering, as a general approach for studying biomolecular mechanisms. The combination of label-free detection and mass measurement results in universal applicability enabling study of interaction stoichiometries, structure, energetics and kinetics. I will demonstrate the power of these measurements using recent results that reveal the molecular mechanisms, enabled by the measurement of the underlying physico-chemical parameters, of fundamental processes such as filament formation and self-assembly both in solution and on bilayer membranes. In combination with future improvements in both technical capabilities and assays, mass photometry could make significant headway towards the ultimate goal of revealing biomolecular mechanisms directly at the molecular level.

Philipp Kukura
Revealing the physicochemical basis of biomolecular interactions with mass photometry

Florian Jupe
Shaping Agriculture at Bayer Crop Science R&D

Health for all, hunger for none – that is the vision that we have here at Bayer. Whether we are scientists in Crop Science, Pharma or Consumer Health, we all seek to deliver world-class innovation, set new standards in sustainability, and drive digital transformation; Science for a better life – that’s how we do it. Farmers around the globe need innovation not only to grow enough but to grow better for our planet and its people. From smallholder farmers in south-east Asia to broad-acre farmers in the Americas, their needs are core drivers for our product design and product development processes at Bayer Crop Science R&D. Exemplified on our R&D pipeline, we will see how innovative technologies are (co-)developed and applied, and what it means to be a part of this highly engaging, collaborative and inclusive, global scientific community.
Basic and translational immunology research in academia and industry

I studied Genetics at the University of Vienna and received my PhD in Hartmut Beug’s laboratory at the IMP on the “characterization of embryonic stem cell derived erythroid progenitors”. I then moved for 10 years to Melbourne, Australia and specialized in immunology at the Walter & Eliza Hall Institute. My own lab in Australia focused on the research of lineage commitment of innate and adaptive immune cells. In 2014 I joined the cancer research department at Boehringer Ingelheim in Vienna. During this time I have worked on several cancer immunotherapy projects and have directed two novel cancer therapies from the beginning of the project into clinical Phase I testing. During my talk I will discuss my experiences driving basic and translational research projects in either academia or at a pharma company and why starting an own gin business advances (my) research.

Tracing and perturbing lineages during human brain organoid development

Induced pluripotent stem cell (iPSC) derived organoids provide models to study human organ development. Organoids are complex, containing numerous cell states and integrative, multi-modal single-cell technologies are needed to understand the mechanisms underlying organoid development. In my talk, I will present two efforts from our lab where we develop novel integrative single-cell methods to understand human brain organoid development. First, I will present iTracer, a lineage recorder that combines reporter barcodes with inducible CRISPR/Cas9 scarring, and is compatible with single-cell and spatial transcriptomics. We apply iTracer to explore clonality and lineage dynamics during cerebral organoid development, and identify a time window of fate restriction as well as variation in neurogenic dynamics between progenitor-neuron families. We also establish long-term 4-D lightsheet microscopy for spatial lineage recording in cerebral organoids and confirm regional clonality in the developing neuroepithelium. We incorporate gene perturbation (iTracer-perturb), and assess the effect of mosaic TSC2 mutations on cerebral organoid development. Second, I will present a data set of paired single-cell transcriptome and accessible chromatin profiling data over a dense time course of human brain organoid development, which we utilize to infer a gene regulatory network of human brain organoid development. To this aim, we have developed Pando, a flexible computational framework that incorporates multi-omic data and transcription binding site predictions to infer a global GRN describing organoid development. We use pooled genetic perturbation with single-cell transcriptome readout to assess transcription factor requirement for cell fate and state regulation in organoid and show interesting alterations of abundance of cell fates. Together, these techniques can be adapted in any iPSC-derived culture system to dissect lineage relationships and regulomes during normal or perturbed development.
Quiescence is a cellular state characterised by reversible cell-cycle arrest and diminished biosynthetic activity that protects against environmental insults, replicative exhaustion and proliferation-induced mutations. Entry into and exit from this state controls development, maintenance and repair of tissues plus, in the adult central nervous system, generation of new neurons, and thus cognition and mood. Cancer stem cells too can undergo quiescence, which confers them resistance to current therapies. Despite clinical relevance, quiescence is poorly understood and is defined functionally given lack of molecular markers. Decrease of the most resource-intensive cellular process of protein synthesis is a feature of quiescence, controlled across species and cell types by inhibition of the Target of Rapamycin (TOR) pathway. In our laboratory, we combine Drosophila genetics with mammalian models and have recently discovered altered nucleocytoplasmic partitioning and nuclear accumulation of polyadenylated RNAs as novel evolutionarily conserved hallmarks of quiescence regulation. Furthermore, we found that nuclear accumulation of messenger RNA (mRNA) in quiescent NSCs (qNSCs) largely predicts protein downregulation, accounting for uncoupling between transcriptome and proteome in quiescence. These mechanisms provide a previously unappreciated regulatory layer to reducing protein synthesis in quiescent cells, whilst priming them for reactivation in response to appropriate cues.

Transcriptional enhancers direct precise patterns of gene expression during development and harbor the majority of mutations associated with disease. To explore the types of mutations within enhancers that underlie disease, we study the impact of single base pair changes within a cardiac enhancer regulated by FGF signaling in the marine chordate Ciona intestinalis (Ciona). We find that absurdly suboptimal affinity ETS TFBS sites are necessary for heart-specific expression. Furthermore, single base-pair changes can optimize the affinity of a single ETS TFBS, leading to an 8-fold increase in affinity, ectopic gene expression, and heart malformations as severe as formation of two hearts. The use of suboptimal affinity sites within developmental enhancers is an established regulatory principle governing tissue-specific expression. Given the prevalence of low-affinity ETS sites within cardiac enhancers genome-wide in Ciona, mouse, and humans, we suggest that single base pair changes that optimize the affinity of ETS sites may be a major driver of congenital heart disease and other Enhanceropathies.
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Claudia Schandl - European Patent Attorney
Rui Lopes - Principle Scientist at Novartis
Grace Liu - Program Manager at Vienna Science and Technology Fund
Lisa Haas - Editor at Nature Cancer
Hildegard Etz - Austrian Patent Office
Lucia Leitner - Medical Science Liaison Amgen
Ekaterini Platanitis - Medical Science Liaison
Annette Denker - Project Leader at McKinsey
Pablo Hofbauer - Co-Founder of HeartBeat.bio
David Hoffmann - Chief Scientific Officer at Angios
Verena Supper - Postdoc at Boehringer Ingelheim
Sebastian Kupka - Postdoc at Boehringer Ingelheim

After Claudia Schandl obtained her BSc in Medical and Pharmaceutical Biotechnology at the University of Applied Sciences Krems, she went to the UK for my Master’s degree and studied Cancer Research and Molecular Biomedicine at the University of Manchester. During her time at the University of Manchester she became interested in the field of Intellectual Property and patent law in particular. So, after returning to Austria, she decided to study Law at the University of Vienna to be able to combine her two passions, science and law.

During her last year of the Law Degree, Claudia started working at REDL Life Science Patent Attorneys, a boutique patent law firm in Vienna specialising on intellectual property rights in Life Science, and became a Patent Attorney Candidate. Meanwhile, she has passed the European Qualifying Examination and work as European Patent Attorney at REDL Life Science Patent Attorneys. Among her core responsibilities are drafting and prosecuting European patent applications in the field of biotechnology, as well as prior art searches, Freedom-to-Operate search and opinions and managing international patent portfolios.
Dr. Rui Lopes completed his MSc in Molecular Oncology in 2010 at the University of Porto, Portugal. In 2011, he received a PhD fellowship (FCT, Portugal) to work at the Netherlands Cancer Institute in Amsterdam. During his PhD, he developed genetic CRISPR screens to study the function of gene regulatory elements in human cells. In 2017, he joined the Postdoc program of Novartis Pharma (Switzerland) and he investigated disease mechanisms mediated by transcription factors in cancer. Currently, he is a Principal Scientist in the Global Drug Development organization of Novartis Pharma. He is a co-author of 16 publications in peer-reviewed journals, including Nature Biotechnology, Nature Communications and Science Advances.

Grace studied Biomedical Science at the University of Melbourne in Australia and completed her PhD in cancer genetics at the Walter and Eliza Hall Institute in Melbourne. For her postdoc, she continued working with mouse models (and even the same gene), but decided to change countries and research focus, joining the immunology group of Meinrad Busslinger at the IMP. Over five years, she remained fascinated by basic research but was increasingly intrigued by the prospect of interacting with research from a different perspective. After considering roles in science communications teams and the ministry, Grace is now a Program Manager at the Vienna Science and Technology Fund, Austria’s largest private non-profit funding organisation.

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Lisa Haas
Editor at Nature Cancer

Lisa Haas studied molecular biology at the University of Vienna, with a specific focus on molecular medicine. She performed her master thesis at the MRC Cancer Unit in Cambridge, UK, where she set out to understand the alterations in the tumor draining lymph node during cancer progression. After obtaining her master’s degree, Lisa joined the lab of Anna Obenauf at the IMP in Vienna to further extend her studies in tumor immunology. Her PhD project was based on the intersection of targeted therapy and immunotherapy and focused on understanding the effects of acquired resistance to targeted therapy on the tumor microenvironment. During her PhD, Lisa discovered that she loved being exposed to the versatile field of cancer research, to read about ongoing developments and to attend conferences and seminars to learn about basic cancer biology and novel therapeutic approaches. She decided to pursue an editorial career, which would combine her love for reading manuscripts with the chance to meet people from different areas and learn about their ongoing research. She started as an Editor at Nature Cancer in 2021 and is now based in Berlin.

Hildegard Etz
Austrian Patent Office

Hildegard Etz has been a patent examiner at the Austrian Patent Office since 2004. Besides her main job of examining patent applications, she is also an ambassador of the Austrian Patent Office and gives talks, workshops and advice to companies and startups throughout Austria around anything related to IP.

After her PhD studies in Microbiology and Genetics she decided not to stay in the lab, and was looking for a job, any job. She applied for a lot of different positions, and the Austrian Patent Office would accept her. Not her first choice, not at all, but after being jobless for a while she decided to start there to have at least something. Meanwhile she has been there for amazingly 17 years, and it has never been boring! (very much to her own astonishment) she must admit, though, that her working field changed from genetics to concrete and now to ship engineering (she spend a lot of her free time on boats), and also her tasks varied a lot: from being a pure patent examiner at the beginning, she soon started to engage in advice services, internal training courses for our patent search software, then became involved in the IP Academy which means giving talks, lectures and workshops. All the time she kept her original job as a patent examiner, which helps her to stay in touch with the basis. She work only part-time at the patent office because she also runs a little business of her own (that is compatible with the patent office, of course), so she knows even better about business life and start-up sorrows.
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Lucia Leitner
Medical Science Liaison

Her biology studies at the University of Vienna, including a semester abroad in Illinois, awakened Lucia Leitner's scientific curiosity and desire to travel. That's why she then applied to the International Graduate School at Heinrich Heine University in Düsseldorf to do research for her PhD in biology in Düsseldorf and Virginia. After a short Postdoc phase at the University Hospital Düsseldorf, she was drawn back to her home country, where she accepted a position as Postdoc Laboratory Manager at Max Perutz Labs, Medical University of Vienna. She has never regretted the subsequent move to the pharmaceutical industry as Medical Science Liaison at Amgen, an international biotechnology company, and enjoys working in this position, which is an interface for scientific exchange between physicians and industry.

Ekaterini Platanitis
Medical Science Liaison

Ekaterini joined the lab of Prof. Thomas Decker at the Max Perutz Labs in 2013 for an experimental master’s thesis. After completion of her work and graduation she went to Cambridge to acquire additional skills in structural biology and to broaden her horizons by gaining new experiences. However, Prof. Decker was able to convince her to return back for a PhD thesis in his lab, which started in 2013. It was during this time, that she met Michael Aichinger, her current boss, who was holding a senior post-doc position at the time that she joined the lab. After finishing her PhD, she accepted a postdoctoral position as university assistant that allowed her to continue and finish the projects of her PhD thesis work, but also included an obligation to teach.

During all those years Michael and Ekaterini had been in contact. He was offered a medical lead position in Immunology at Janssen Austria (Johnson & Johnson ) when she started sending out her first applications and it was a coincidence that he reached out to inform her about an open position as a medical science liaison in his team. She applied to the open position and this is how she ended up in the Medical Affairs department at Janssen Austrian and her expectations have been met very well so far. Medical affairs is the department within a pharmaceutical company that communicates accurate information to healthcare providers. This communication includes responding to requests for information about off-label usage, publications, safety information, and independent medical education. Additional responsibilities include conducting Post-launch clinical trials and supporting the brand team in formulating product messages.
Annette Denker
Project Leader at McKinsey

Annette did her Bachelor studies in Molecular Biotechnology at the University of Heidelberg, followed by joining the MSc/PhD program Molecular Biology (IMPRS) in Goettingen, where she received her PhD in 2011, working on synaptic vesicle recycling in vivo. She then pursued a postdoc in chromatin architecture at the Salk Institute in La Jolla, California, US, and a second postdoc at the Hubrecht Institute in Utrecht, The Netherlands. In 2016, she decided to leave science and join McKinsey to work as a consultant in the healthcare and pharma space. Annette is currently a project leader with McKinsey in the Munich office.

David Hoffmann & Pablo Hofbauer
Start-up Foundation

David Hoffmann obtained his master’s degree from the University of Vienna, during which he was trained in the laboratory of Sakari Vanharanta at the MRC Cancer Unit in Cambridge, UK. In this project, David studied the contribution of the epigenetic remodeling complex SWI/SNF to the development of renal cancer. After returning from the UK, David joined the lab of Josef Penninger for his PhD, where he took on a broad range of projects, ranging from basic T cell biology to glycosylation in cancer, an approach he later extended to COVID-19 research. During his PhD, David discovered that the aspects he enjoyed most about science where the conceptual ones – the development of new project ideas, the establishment of carefully crafted experimental plans and the project management. He decided to exploit these talents by taking on the position as the Chief Scientific Officer of Angios, a recently founded biotech start-up. The company based in Innsbruck, Austria and aims to generate vascular transplants for the treatment of diabetic vascular diseases, as well as developing therapies for diabetic retinopathy.

Pablo co-founded HeartBeat.bio and co-developed its proprietary cardioid technology in Sasha Mendjan’s laboratory at IMBA in Vienna. He obtained his PhD in molecular biology from the University of Vienna as part of the Vienna Biocenter PhD program. Prior to that he worked on cardiac tissue engineering in the laboratory of Brenda Ogle at the University of Minnesota. He obtained a master’s degree in tissue engineering and bachelor’s degree in biomedical engineering from the University of Applied Sciences Technikum Wien, while working on endothelial cell biology at the Ludwig Boltzmann Institute for experimental and clinical Traumatology.
Verena Supper & Sebastian Kupka
Postdoc in Industry

Verena Supper studied Molecular Biology at the University of Vienna in Austria. For her master thesis and PhD thesis she worked on immunomodulatory proteins in αβ T cells at the Department of Molecular Immunology at the Medical University of Vienna in the Lab of Univ. Prof. Dr. Hannes Stockinger. During her PhD the GEN-AU mobility program enabled her to gain experience in proteomics for 6 months at the Department of Molecular Medicine at the Max Planck Institute of Biochemistry in Martinsried in Germany. After the birth of her son and her graduation she started as Lab Scientist at Boehringer Ingelheim RCV in Austria supporting early research projects in Oncology Research and Development. In 2019 she assumed a Postdoc position at Boehringer Ingelheim Oncology to gain more detailed biological insights in molecular functions of potential new drug targets.

Sebastian Kupka completed his MSc in Biology at the Justus-Liebig-University Giessen, Germany, in 2011. In the group of Prof. Michael Marun, he investigated a regulatory mechanism of p65 by the IL-1 family member IL-33. As part of his master’s studies, he decided to do an internship abroad in the laboratory of Prof. Henning Walczak in London. With the ambition to continue in science in the field of inflammatory cell signaling, Sebastian applied for a PhD position in Prof. Walczak’s group in 2011. During his PhD, he worked on the regulation of the TNFR1-signalling complex by LUBAC and associated deubiquitinases. He obtained his PhD degree in 2017 from the University College London. After a sabbatical year, Sebastian returned for a short Postdoc position to Prof. Walczak’s group from 2018-2019. During that time, Sebastian got introduced to Sebastian Carotta, Senior Scientific Director at Boehringer Ingelheim in Vienna. He applied for a Postdoc position and got accepted. Currently, he works on STING signalling and inflammatory forms of cell death.
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Swathi Jayaram
"Cell cycle as source for heterogeneity in the exit from naive pluripotency"

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"The neighborhood of the Spike gene is a hotspot for modular intertypic homologous and non-homologous recombination in coronaviruses genome’s"

Gioia Boncompagni
"Leukemic cell-derived Interleukin-9 (IL-9) impairs the ability of cytotoxic T lymphocytes to form functional lytic synapses in chronic lymphocytic leukemia"

Isabella Vökl
"Mechanistic dissection of primary ciliogenesis during embryonic development using a 3D in vitro model system"

Xuan Wang
"Electroacupuncture alleviates diabetic peripheral neuropathy by regulating glycolipid-related GLO/AGEs/RAGE axis"

Athanasia Yiapanas
"Investigating the Effect of Mislocalised Adhesion Proteins in Brain Cancer"

Fabrizia Zevolini
"The mitotic regulator Polo-like kinase 1 promotes immune synapse assembly"

Sara Mazzoleni
"Characterization of a new conditional knock-out (cKO) mouse model for Developmental and Epileptic Encephalopathy 9 (DEE9)"

Federica Miramondi
"Neural precursor/stem cell-based therapy for Rett Syndrome"

Alicja Armatawska
"The connection between Maft and translation in yeast"

Loan Vuillard
"Understanding cellular response of perturbations via large-scale high-content imaging screens"

Ronja Reinhardt
"Insights to Protein kinase D activation , a conserved molecular switch for secretion"

Vera Sham
"Genomic secret to plants adaptation and not meiotic implicated but physiology implicated: effect of polyplody on stomata cell size and photosynthetic rate"

Sebastian Didusch
"Amica: an interactive and user-friendly web-platform for the analysis of proteomics data"

Ines Ferreira
"Culture-free Resistome Detection with the ARESdb Enrichment Panel"

Marina Bruch Oms
"Cross-talk between activated fibroblasts and macrophages in tumor development"

Mehuli Chakraborty
"Role of SUMOylation in transcriptional reprogramming in AML response to epigenetic therapy"

Salvo Lombardo
"A network-based approach to environmental genetic perturbations in embryo development"

João Cotovio
"A Bridge Between Development and Engineering: Creating Liver Bud Organoids from hiPSCs"

Maria Mortoglou
"miR21 expression leads to significant alterations in mesenchymal markers to reduce stemness in pancreatic ductal adenocarcinoma cells"

Hasan Akyol
"Localization of DEX Isomerase 2 During Cell Cycle"

Paola Pacifico
"Human TrkAR649W mutation specifically impairs nociception, sweating and cognitive abilities: a mouse model of HSAN IV"

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Luis Miguel Cerron Alvar
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Matthias Hinterdorfer
"AKIRIN2 controls the nuclear import of proteasomes in vertebrates"
Each academic year the Vienna BioCenter (VBC) PhD Awards are given to postgraduate students in acknowledgement of their outstanding PhD theses. The award was inspired by Renée Schroeder (formerly of the Max Perutz Labs, University of Vienna) and is supported by the research institutes involved in postgraduate education at the Vienna BioCenter.

The Lauwers family created the Mattias Lauwers award. This award is given on an annual basis to the PhD student who gives the best Monday seminar. The criteria for this award will reflect Mattias. He took great pride in his Monday seminars, always aiming to be the best. His talks were informative, interesting, accessible and he prepared for every conceivable question.

The Vienna BioCenter PhD Program is committed to foster and support creative and interdisciplinary thinking in science. As an incentive to address complex problems using creative, non-standard approaches, we award a yearly stipend for designing the best curiosity-driven, high-risk experiment. One or more students can participate in the design and implementation of the experiment, which may (but does not necessarily have to be) within the immediate scope of their own projects, and which can be performed in any laboratory of their choice.
PhD Graduates

Ahel Juraj
Attendendorf Elisabeth Katharina
Aschauer Dominik Florian
Azar Daniel Fadi
Bente Heinrich
Bhat Poojja
Borroni Martina
Burns Robin
Cabrera Quio Luis Enrique
Capitão Cláudio
Charest Julien
Chia Khong-Sam
Cibulka Jakub
Coimbatore Ravichandran
Madhwesh
Conzemius Rick
Dello Stritto Maria Rosaria
Demirüz Bas Duygu
Deutschmann-Ole Karin
Dexheimer Philipp Julian
Eislmayr Kevin
Fennell Liian
Galimberti Elena
Gromberg Elena
Gutierrez Perez Paula
Haas Lisa
Hendling Michaela
Hill Louisa
Hofbauer Pablo Andrés
Hoffmann David
Hollenstein David
Kaczanowska Joanna
Kao Ping
Kargl Dominic Herbert
Kogler Melanie
Lackner Andreas
Lindenhofe Dominik
Madrtsch Silvia

Clausen
Jantsch
Rumpel
Skern
Mittelsten Scheid
Ameres
Kovarik
Nordborg
Cochella
Rhia
Cochella
Djamei
Koehler
Campbell

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Max Perutz Labs
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Max Perutz Labs
Max Perutz Labs

Manzenreither Raphael
Mateos Borja
Melo Alcantara André
Michilits Georg
Miletic Sean
Mitter Michael
Navarrete Gonzalez Fernando
Neumayr Christoph
Nimip Simon
Paldi Katalin
Pandey Bikram
Papareddy Ranjith Kumar
Parys Katarzyna
Perestrello Albuquerque de Pontes
LeCa Maria Ines
Petrovic Mina
Peycheva Mihaela
Pflug Florian
Pivovarovva Yulia
Plotnikova Aleksandra
Pöhn Birgit
Pusic Petra
Rodriguez Alan
Romanouska Anete
Savova Adriana
Schnabl Jakob
Schoenenwald Amelie
Seitner Denise
Sneezum Lucy
Soto Limenez Luz Mayela
Stecher Karin
Stephani Madlen
Stepinac Emma
Umkehrer Christian
Velkova Maria
Wheeler Faye
Zekoll Theresa

Ameres
Konrat
Djamei
Elling
Marlovits
Gerlich
Djamei
Stark
Keays
Nodine
Jonak
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Organizing this symposium over the past two years during a global pandemic has been challenging, but it has also shown us the tremendous desire and motivation of the scientific community to continue sharing our passion for research. “Building Bridges” is not only the theme that best describes our scientific narrative combining curiosity, passion and technology. It is also a reminder that, beyond our everyday life in the lab, we all thrive when we share and discuss our work. Connecting the dots extends our data, hence building both social and scientific bridges was our primary motivation to organize this event. We are looking forward to two days of excellent research and engaging discussions and we hope that you too will enjoy contributing to this idea.

Sarah Grünbacher, Lorena Hofbauer, David Hoi, Ameya Khandekar,
Katherina Tavernini, Esther Uijtewaal, Sakurako Wong, Vivien Vogt