



## Biomed Retreat 2022 – Meeting Overview

### Sunday, 18 September 2022

08:20	Meeting point at Zürich HB in front of platform 4
08:35 - 9:30	Train + bus connection to Kartause Ittingen
9:30 - 10:30	Registration and little refreshment
10:30	Welcome Notes
10:30 - 11:00	<b>Plenary Lectures I</b> Prof. Dr. Berend Snijder
11:00 - 12:30	<b>Student Session I</b> Immune system: friend and foe (Presentations)
12:30 - 14:00	Lunch
14:00 - 15:00	Poster session I
15:00 - 16:00	<b>Plenary Lectures II</b> Prof. Dr. Bernd Bodenmiller Prof. Dr. med. Arnold von Eckardstein
16:00 - 17:30	<b>Student Session II</b> Organ and systemic pathophysiology (Presentations)
17:30 - 18:00	Snacks and beverages
18:00 - 19:00	Career Panel with LSZGS Alumni
19:00 - 20:00	Check-in rooms
20:00 - 21:00	Dinner
21:00 - ...	Networking and drinks

### Monday, 19 September 2022

07:00 - 10:00	Breakfast and check-out from rooms
10:00 - 10:30	<b>Plenary Lecture III</b> Prof. Dr. Ori Bar-Nur
10:30 - 12:00	<b>Student Session III</b> Cell fate: to see and to conquer it



12:00 - 13:00	Poster Session III
13:00 - 13:15	Prizes for best presentation and poster, Closing remarks
13:15 - 15:30	Free-time activity
15:30 - 16:30	Train + bus connection to Zürich HB

## Student and Poster Sessions

### Student Session I – Immune System: friend and foe

Presentations by 3<sup>rd</sup> and 4<sup>th</sup> year PhD students (8 minutes presentation, 2 minutes Q&A)

**1. Amela Hukara**

“The role of Fosl-2 transcription factor in macrophage polarization and phagocytosis in systemic sclerosis”

**2. Sam Galen Edalat**

“A Single Atlas of Human Synovium in Rheumatoid Arthritis”

**3. Samantha Sherman**

“GM-CSF derived from lung epithelial cells supports alveolar macrophage differentiation and survival”

**4. Yulia Volkova**

“The oxygen sensor factor inhibiting HIF (FIH) catalyzes the formation of a likely covalent protein complex with the NF-κB inhibitor β (IκBβ)”

**5. Nikolaos Poulis**

“The Potential Of Ipsc-derived Macrophages To Assess Tissue Engineered Matrices' Immunocompatibility”

**6. Irina Léa Dubach**

“Targeted erythrophagocyte reprogramming of Kupffer cells halts cancer immunotherapy associated liver toxicity”

**7. Lucia Cambiaggi**

“Resolvin D1 Signaling in Primary Human Macrophages”

## Student Session II – Organ and systemic pathophysiology

Presentations by 3<sup>rd</sup> and 4<sup>th</sup> year PhD students (8 minutes presentation, 2 minutes Q&A)

**1. Patrick Krohn**

“Multisystem Involvement, Defective Lysosomes, and Impaired Autophagy in a Novel Rat Model of Nephropathic Cystinosis”

**2. Marta Mariniello**

“Pathogenic mechanisms in ADTKD-UMOD: from humanized mouse models to cell systems”

**3. Angela Portmann**

“Sex-differences in the development and clinical course of left ventricular hypertrophy”

**4. Andrea Boraschi**

“Non-invasive measurement of head dielectric properties and its potential application”

**5. David Lauer**

“Integrative analysis of chronic experimental and human fibrosing ILD using image- and molecular based omics approaches”

**6. Lynn Ebner**

“Dual-active gene therapy targeting RPE and photoreceptors rescues mouse models of chronic hypoxia”

**7. Itzel Shantal Martinez Lopez**

“MicroRNA expression analysis in Chronic Thromboembolic Pulmonary Hypertension using pulmonary endarterectomy derived samples”

**8. Dominique Lisa Birrer**

“Sex Disparities in Outcomes following Major Liver Surgery – New powers of estrogen?”

**9. Polina Zaytseva**

“Advance the clinical relevance of human tissue-engineered matrices - Towards high-pressure applications”

**10. Alexander Laure**

“Transcriptomic Analysis of Malignant Pleural Mesothelioma (MPM) Reveals Insights for Basic Research and Preclinical Testing”

## Student Session III – Cell fate: to see and to conquer it

Presentations by 3<sup>rd</sup> and 4<sup>th</sup> year PhD students (8 minutes presentation, 2 minutes Q&A)

**1. Yiqi Gong**

“A large-scale microRNA functional high-throughput screening identifies mir-515 and mir-519e as potent inducers of human ipsc-derived cardiomyocyte proliferation”

**2. Guillermo Turiel**

“scRNAseq analysis on physiological and pathological angiogenesis”

**3. Matthew Denley**

“Mitochondrial dysfunction drives patient iPSC-derived neuronal pathology in methylmalonic aciduria”

**4. Xhem Qabrati**

“Transgene-free direct reprogramming of mouse fibroblasts into myogenic progenitors utilizing modified mRNA and small molecules”

**5. Laura Hinte**

“Epigenetic landscapes of white and beige adipocytes”

**6. Giada Bacchin**

“Uncovering alternative molecular paths for reprogramming mouse fibroblasts into functional myogenic progenitor cells”

**7. Eric Gähwiler**

“Gene-Edited Cell Sources for the Generation of Designer Tissue-Engineered Matrices”

**8. Markus Holzner**

“New Modulators to the Hedgehog Signalling Pathway”

**9. Nick Herger**

“Development of an allogeneic anti-inflammatory mesenchymal stem cell-based therapy for chronic low back pain patients with Modic type 1 changes”

## Poster Session I – 18.09.2022

The number associated to each poster will be present on the pinboard where the poster needs to be attached to

**1. Yuansheng Zhang**

“Risk prediction model of MACE after kidney transplantation”

**2. Cristine Marie Yde Ohki**

“Involvement of the Wnt-Signaling in Methylphenidate (Ritalin) treatment of ADHD”

**3. Bart Thomson**

“Blood oxygenation-level dependent cerebrovascular reactivity imaging as strategy to monitor CSF-hemoglobin toxicity”

**4. Xuan Shu**

“Investigating the role of RNA binding protein Celf3 in diabetes”

**5. Ekaterina Maevskaia**

“Osteoconductive TPMS-based scaffolds for bone tissue engineering”

**6. Pascal Breitenstein**

“Enhancing the adaptive remodeling properties of human-derived tissue-engineered matrices by using an induced apoptotic switch”

**7. Cédric Borreguero**

“Metabolic characteristics of a Dguok mutant mouse model”

**8. Fabienne Caldana**

“Gravitational force – induced nuclear mechanotransduction in muscle cells”

**9. Nevena Jankovic**

“Investigating cross-talk between the endo-lysosomal system and calcium signaling in the kidney proximal tubule”

**10. Chiara Scaffidi**

“The role of IL-23 signaling in obesity-induced insulin resistance and NAFLD”

**11. Masoumeh Mirrahimi**

“Joint specific gene expression in synovial fibroblasts”

**12. Marijn Wilmink**

“The role of elevated triglyceride levels in the development of hypertension in SHR rats”

**13. Adam Majcher**

“Sphingosine-1-phosphate lyase insufficiency syndrome (SPLIS)”

**14. Porawit Kamnoedboon**

“Effect of age in exosome mediated pulp regeneration”

**15. Zsuzsa Radvanyi**

“Contribution of SLC20 and SLC34 phosphate-transporters to renal phosphate transport in rat kidney”

**16. Angelica Rigutto**

“High dimensional analysis of infiltrating immune cells in tumors from patients with mesothelioma and lung cancer”

**17. Simone Ponta**

“CRISPR-Cas9 Strategies for the Upregulation of Fetal Hemoglobin and Adult Hemoglobin 2 to Treat the  $\beta$ -Hemoglobinopathies”

**18. Olga Maria Lempke**

“The molecular identity of renal Epo-producing cells in healthy and diseased kidney.”

**19. Malgorzata Wilk**

“Single cell variability of hypoxia-inducible gene expression”

**20. Nadescha Viviane Hänggi**

“Body fluid identification and assignment to donors using an improved targeted mRNA massively parallel sequencing approach – Preliminary Results”

**21. Marta Girona Alarcon**

“In vivo synchronized X-ray tomography of mouse cerebrospinal fluid spaces”

**22. Alexandra Khmelevskaya**

“Characterization of synovium T-cell subsets in immune-mediated arthritic conditions”

**23. Anna-Lea Stalder**

“Exploring the microenvironment of hematoma in the brain”

**24. Valentin Johannes Weber**

“Establishment of a new approach for the molecular diagnosis of hereditary retinal dystrophies”

**25. Valentin Baumgartner**

“Targeting mitochondria: A link between Prostate Cancer Metabolism and Novel Therapeutic Approaches”

**26. Luise Linzmeier**

“The role of the gut-liver axis in the pathogenesis of primary sclerosing cholangitis”

**27. Melina Perez Vertti Valdes**

“Pain or no pain – a role for cross-talk between skin fibroblasts and nerve fibers in Complex regional pain syndrome (CRPS) and Charcot neuropathy (CN)”

**28. Thamonwan Diteepeng**

“Protein misfolding: an additional mechanism in the heart-brain communication after ischemic stroke”

**30. Yustina Puspitasari**

“Effects of PCSK9 inhibitor after stent implantation: A novel potential therapeutic strategy to reduce stent-related complications”

**Poster Session II – 19.09.2022**

The number associated to each poster will be present on the pinboard where the poster needs to be attached to

**1. Pratintip Lee**

“Omega-3 Fatty Acids: a Nutritional Intervention on Megakaryocyte and Endothelial Cell Aging “The Role of SIRT 1””

**2. Nicolina Zjacic**

“Pre-natal functional testing pipeline for variants of unknown significance in Noonan syndrome genes”

**3. Valery Visser**

“Computational models to study the influence of valve design on remodeling in tissue engineered pulmonary heart valves”

**4. Miriam Gura**

“Mutations in methylmalonyl-CoA mutase correlate with higher degradation in HEK cells”

**5. Lisa Crone**

“Antigen-specificity of antibodies in breast milk”

**6. Tamara Mengis**

“The central role of the disc degradome in the pathobiology of Modic changes”

**7. Aurelia Gondrand**

“Expression of antimicrobial enzyme dual oxidase 2 (DUOX2) associated with helminth-induced type II immunity”

**8. Arian Ehterami**

“Design, development, and fabrication of a bioresorbable polymeric heart valve stent using 3d printing”

**9. Tongtong Wang**

“A UCP1-independent thermogenic adipocyte subpopulation is important for early cold adaptation and systematic metabolism”

**10. Ivna Ivankovic**

“A versatile computational pipeline for the preprocessing of cell-free DNA fragmentation data”

**11. Yu-Jen Wang**

“NAD<sup>+</sup> boosting as pan-sirtuin activation tended to increase atherosclerotic plaques and systemic inflammation in apoE knockout mice”

**12. Ievgeniia Kocherova**

“Combined single-cell/ bulk RNA sequencing and proteomics analysis reveals new candidate targets involved in myocardial fibrogenesis”

**13. Akash Chakravarty**

“BMP-2 is reduced in human blood following the passage through the pulmonary circulation”

**14. Sven Klassa**

“Assessing the effect of urea cycle gene variants on protein stability by a fluorescence based assay”

**15. Zuzana Oulehlova**

“Restoring Pigmentation in the Skin”

**16. Christine Ling Li Trautmann**

“Generation of cow myogenic progenitor cells for cultivated meat production”

**17. Peter Horvath**

“Development and Validation of Offline-Collection Systems for Breath Analysis of Children using High-Resolution Mass Spectrometry”

**18. Eva Breuer**

“An optimized protocol for the isolation of regenerating hepatocytes after partial hepatectomy in mice”

**19. Inseon Kim**

“Integrative molecular roadmap for direct conversion of fibroblasts into myocytes and myogenic progenitor cells”

**20. Meret Allemann**

“Microbiome studies in cardiovascular disease”

**21. Luca Merolla**

“Characterisation of Egr1 activation in models of retinitis pigmentosa”

**22. Agnieszka Jucht**

“Prolyl 4-hydroxylase domain 1-3 (PHD1-3) enzymatic activity leads to oxygen-dependent likely covalent protein interactions in cells”

**23. Luca Truscello**

“Intratumoral microbiota and breast cancer metastasis”

**24. Giulia Mazzini**

“Amylin: centrally mediated actions on metabolism and memory”

**25. Fen Long**

“Medag regulates cAMP/PKA signalling”

**26. Anja Frei**

“Multiplex imaging based immunoprofiling of cancer”

**27. Sara Barreiro Correia**

“Axial arrangement of transport in the proximal tubule and adaptation to nephron loss”