

PROGRAMME

virtual MBExC retreat 08/09 March 2021 in Göttingen

Monday, 08 March 2021

09:00 AM	Welcome by Tobias Moser
09:10 AM	Current status of the MBExC / Member assembly (restricted to MBExC members)
10:00 AM	New members and research highlights Chair: C. Steinem
10:00	Carola Gregor <i>"New tools for autonomous bioluminescence imaging"</i> (10+5)
10:15	Antoine Huet <i>"Challenging the interaural time difference neural network with supranatural optogenetic stimulation"</i> (10+5)
10:30	short coffee break (15)
10:45	Haibo Wang <i>"Structural insights into function of the SAGA transcription coactivators in chromatin context."</i> (20+5)
11:10	Lukas Cyganek <i>"Intronic CRISPR repair in a preclinical model of Noonan syndrome-associated cardiomyopathy"</i> (20+5)
11:35	Marina Eckermann <i>"3d virtual pathohistology of lung tissue from COVID-19 patients based on phase contrast X-ray tomography"</i> (20+5)
12:00 PM	Lunch Break
01:00 PM	Session 1 "Bioimaging: experimental, computational and theoretical approaches" Chairs: T. Salditt / S. Jakobs
01:00	Jörg Enderlein <i>"Metal-induced energy-transfer superresolution imaging"</i> (12+5)
01:17	Frauke Alves <i>"Visualization of structural features of diseased cardiac tissue by high-resolution multiphoton imaging"</i> (12+5)
01:34	Susann Michanski <i>"Exploring the third dimension with volume electron microscopy"</i> (12+5)
01:51	Housen Li <i>"Multiple haplotype reconstruction from allele frequency data"</i> (12+5)
02:08	Maik Engeholm <i>"Structure and function of CHD family chromatin remodellers"</i> (12+5)
02:25	Niko Schwenzer (7+3) <i>"Optimized CaV1.3 tagging for live-cell nanoscopy of dynamic nanodomain assembly"</i>
02:35	Till Stephan <i>"Super-resolution microscopy of mitochondria"</i> (7+3)
02:45	Marie-Kristin Schreiber <i>"Generation of CRISPR-edited tools to quantify and visualize myelination in bio-engineered neuronal organoids"</i> (7+3)
03:00 PM	Coffee Break
03:30 PM	Poster Session I (Research alliance 1.1 – Research alliance 2.2)
04:30 PM	Workshop I "Emerging topics: Current response of Göttingen research campus to COVID-19" Chairs: R. Fernandez-Busnadiego / P. Cramer Viola Priesemann (<i>simulations</i>) Tim Salditt (<i>imaging</i>) Stefan Pöhlmann (<i>new antivirals</i>) Goran Kokic (<i>remdesivir</i>) Matthias Dobbelsstein (<i>cell-based systems</i>) Wolfram Hubertus Zimmermann (<i>modelling of COVID-19 cardiomyopathy in engineered myocardium</i>)
05:30 PM	End of day 1

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09:00 AM	Session 2 “Bridging time and length scales of functional organization” Chair: T. Moser
09:00	Hauke Hillen <i>“Mechanisms and organization of mitochondrial gene expression”</i> (20+3)
09:23	Nikolas Teiwes <i>“Characterization of giant plasma membrane vesicles: towards a native-like in vitro system”</i> (10+3)
09:36	Silvio Rizzoli <i>“The 3D proteome of the postsynaptic spine”</i> (20+3)
09:59	Abhishek Aich <i>“Modelling human mitochondrial translation dysfunction in mice”</i> (10+3)
10:12	Thomas Mager <i>“Advanced optogenes for the photostimulation of excitable cells”</i> (20+3)
10:35	Lina Jaime Tobon <i>“Diversity in inner hair cell’s synaptic transmission”</i> (10+3)
10:48	Tommaso Cavazza <i>“Parental genome unification is highly error-prone in mammalian embryos”</i> (10+3)
11:00 AM	Coffee Break
11:15 AM	Workshop II “Deciphering genes & mechanisms of inherited disorders” Chairs: B. Wollnik / L. Cyganek (45) Bernd Wollnik (<i>How to identify disease-associated genes</i>) Lukas Cyganek (<i>How to generate disease-associated cellular models</i>) Alexandra Viktoria Busley (<i>Disease modelling using patient- & CRISPRed iPSCs</i>)
12:00 PM	Lunch Break
01:00 PM	Poster Session II (Research alliance 3.1 – Research alliance 3.2)
02:00 PM	Session 3 “Cardiac and neural networks of excitable cells” Chair: S. Luther
02:00	Tobias Brüggmann <i>“Neuropsin (OPN5) for specific control of Gq signalling”</i> (20+5)
02:25	Rupamanjari Majumder <i>“Light-based control of spiral wave dynamics in cardiac tissue”</i> (20+5)
02:50	Maria Patapia Zafeiriou <i>“3D excitable cell networks of brain and heart in human bioengineered tissues”</i> (20+5)
03:15	Tim Gollisch <i>“Nonlinear receptive fields and the encoding of natural images in the retina”</i> (20+5)
03:40	Noa Lipstein <i>“Bi-directional regulation of synaptic vesicle replenishment by Munc13-phospholipid interactions”</i> (7+3)
03:50	Eric Schoger <i>“Targeted transcriptional activation by nuclease dead Cas9”</i> (7+3)
04:00 PM	Coffee Break
04:15 PM	Keynote Lecture Chair T. Moser Jan Huisken (Morgridge Institute for Research, Madison WI, USA) <i>“Light sheet microscopy across scales in live and fixed tissues”</i>
05:15 PM	Summary – End T. Moser