

## Program

Thursday, 10.2. <i>Talks</i>			
Session 1	13:00	13:30	Opening words by the Heads of the doctoral schools Opening words by the vice rector of the TU Graz and Uni Graz Opening by committee
	13:30	14:20	<b>Keynote lecture</b> <i>TBA</i> Associate Professor Anthony Gitter (University of Wisconsin-Madison, USA)
	14:20	15:00	<i>Bacterial genotoxin tilimycin destabilizes host microbiota and drives evolution of antibiotic resistance in vivo</i> Amar Cosic
			<i>Production of thermally stable decarboxylases using ancestral sequence reconstruction</i> Kamela Myrtollari
			<i>Light-driven cyanobacterial biotransformations are limited by the intracellular electron supply</i> Giovanni Davide Barone
15:00	15:20	Coffee Break	
Session 2	15:20	15:50	Poster Session A
	15:50	16:50	<i>Engineering of NADPH supply boosts photosynthesis-driven biotransformation</i> Hanna Grimm
			<i>Establishment of an Activity Screening Platform for Lipid Hydrolases</i> Johannes Breithofer
			<i>A newly found pocket in Fatty acyl AMP Ligases that direct fatty acid pools towards complex lipid synthesis</i> Dubey Noopur
16:50		Closing words Day 1	

Thursday, 10.2. <i>Poster</i>		
Poster Session A	1	<i>Vibrio natriegens as Expression Host for Recombinant Proteins Containing Non-Canonical Amino Acids</i> Karina Stadler
	2	<i>A general strategy for functionalization of de novo designed helical bundle proteins</i> Adrian Tripp
	3	<i>Functional characterization of novel NADH oxidases from Herbaspirillum seropedicae</i> Karishma Shah
	4	<i>Expression and purification optimization of membrane associated tocopherol cyclase involved in vitamin E production</i> Christoph Grininger
	5	<i>EasC/EasE versus CnsD/CnsA – key players in clavine alkaloid biosynthesis</i> Bianca Kerschbaumer
	6	<i>Deep Mutational Scanning of <math>\alpha</math>-Ketoglutarate dependent, Non-Heme Iron (II) Dioxygenases</i> Kristin Bauer
	7	<i>Elucidating spermidine effects on sleep deprivation induced motoric deficits in Drosophila melanogaster</i> Nemanja Radic
	8	<i>Adipose derived stem cells as a tool for regenerative medicine</i> Anna Schwarz
	9	<i>Towards a biophysical characterization of the lipid-droplet associated G0/G1 switch protein (GOS2)</i> Carlos Francisco Rodriguez Gamez
	10	<i>Comparative transcriptome and lipidome analyses of a cholesterol producing K. phaffii strain</i> Astrid Radkohl

Friday, 11.2. Talks			
Session 3	09:00	09:10	Opening by committee
	09:10	10:00	<b>Keynote lecture</b> <i>Integrating biochemical and bioprocess engineering approaches for improving water quality and the recovery of resources</i> Dr. Adrian Oehmen (University of Queensland, Australia)
	10:00	10:40	<i>Catalytic functionalization of a parametrically designed alpha-helical barrel protein with high thermodynamic stability</i> Wael Elaily
			<i>Regulatory interplay of RpoS and RssB controls motility and colonization in Vibrio cholera</i> Martina Wölflingseder
10:40	11:00	Coffee Break	
Session 4	11:00	12:00	<i>The function of arginine-methylation in the life cycle of the ribosomal protein Rps2 in S. cerevisiae</i> Maximilian Mack
			<i>Naturally occurring ON-OFF switches: Blue light-regulated LOV-diguanylate cyclases</i> Uršula Vide
			<i>Computational design of de novo proteins with oligomeric heme-binded bundle geometries</i> Veronica Delsoglio
	12:00	12:30	Poster Session B
	12:30	13:20	<b>Keynote lecture</b> <i>TBA</i> Prof. Dörte Rother (Forschungszentrum Jülich GmbH, Germany)
13:20	13:40	ÖGMBT/YLSA Sponsor	
		PhD Union Sponsor	
Closing remarks	13:40	14:00	Polling and give away of prices Closing words by the Heads of the doctoral schools

Friday, 11.2. <i>Poster</i>		
Poster Session B	1	<i>Mutual tripartite interactions of microbial communities in a soil-plant-aphid microcosm system</i> Adrian Wolfgang
	2	<i>Assaying the Activity of OmpLA in Symmetric and Asymmetric Lipid Membranes</i> Paulina Piller
	3	<i>Impact of SARS-CoV-2 variants on virus entry and replication</i> Melina Hardt
	4	<i>Investigating the inhibitory effect of azo-dyes on the activity of chorismate synthases from various organisms</i> Katharina Fuchs
	5	<i>Amino acid 213, a key residue for catalytic specificity of an unspecific peroxygenase (UPO) from Aspergillus brasiliensis</i> Carsten Pichler
	6	<i>Computational design of de novo protein pores</i> Julia Messenlehner
	7	<i>Spermidine actions towards sleep deprivation induced deficits in AD fruit fly model</i> Sophie Schmid
	8	<i>Crystallization and structure determination of thermally stable phenolic acid decarboxylase variants</i> Daniel Mokos
	9	<i>Characterization of Borneol type dehydrogenase from Tanacetum parthenium</i> Mahsa Takhtechian

## Prof. Dr. Dörte Rother



Prof. Dr. Dörte Rother obtained her diploma in biology from the RWTH Aachen University in Germany. She received her doctoral degree from the Heinrich-Heine University Düsseldorf in 2008 *summa cum laude*. She proceeded with a DFG-Postdoc scholarship at the RWTH Aachen University and became a postdoctoral student at the Forschungszentrum Jülich GmbH. In 2012 she became a Helmholtz-young investigators group leader at the Forschungszentrum Jülich GmbH and continued with obtaining her Junior professorship from the RWTH Aachen University. In 2019, she got her full professorship for “Synthetic Enzyme Cascades” at the RWTH Aachen University. Further, she a member of the selection committee for the “GDCh-Prize for Biocatalysis” as well as a member of the early career advisory board of “ACS catalysis” (2017/18). In 2019, she received the “Biotrans Junior Award”. Her key research activities comprise synthetic (chemo-)enzymatic cascades, integrated engineering, as well as in biocatalysis in unconventional media.

Dörte Rother is the group leader of the Biocatalysis group at the research center Jülich GmbH since 2019. Her research group “Synthetic enzyme cascades” focusses on the development of value-generating processes using synthetic enzyme cascades. The group combines catalysts to multi-step biotransformations which do not occur conjunct in nature. Rational enzyme engineering, reaction optimization as well as process design is used to establish economically and ecologically efficient enzyme cascades.

## Dr. Adrian Oehmen



Adrian Oehmen is a Senior Lecturer in the School of Chemical Engineering at the University of Queensland (Australia). He leads research in the area of bioprocess engineering, particularly focussing on wastewater treatment and resource recovery. His research interests include enhanced biological phosphorus removal (EBPR or BioP), metabolic modelling, biopolymer (polyhydroxyalkanoate – PHA) production, micropollutant removal and greenhouse gas (N<sub>2</sub>O) assessment and mitigation. He also focusses on other aspects of bioprocess engineering, including microbial encapsulation, bioprocess modelling and food and beverage applications. He has published more than 100 papers in international scientific journals, led or collaborated on more than 30 research projects (many with industry). He is active within the International Water Association (IWA), serving on specialist group and conference committees and is an Associate Editor of Water Research.

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