

Program Final Symposium 28 – 31 March 2022

Monday 28 March

Location: Haus der Universität, Schadowplatz 14, Düsseldorf, DE

14:30-15:30	Registration
15:30-16:00	Welcome and start of the symposium <i>Gaia Fancellu, Siti Nurjanah, Yvan Rousset</i>
16:00-17:00	Keynote 1: opening lecture Sabine Fuchs – Prime Time
18:00-20:00	<i>Get-together Drinks & Snacks</i> <i>Location: Schloss Mickeln, Alt Himmelgeist 25, Düsseldorf</i>

Tuesday 29 March

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Session I	Enzyme catalysis at the polymer surface <i>Session chairs: Ligia Kiyuna, Flavio Bonanini</i>
9:00-9:45	Adélaïde Raguin – Impact of substrate structural properties in enzymatic reactions, the case of lignocellulose
9:45-10:10	Gaia Fancellu – A simple methodology to investigate glycogen structure and the activity of glycogen-active enzymes in Glycogen Storage Diseases (GSDs)
10:10-10:40	<i>Coffee break</i>
10:40-11:05	Evaldas Simanavicius – Chemoenzymatic synthesis of glucans to assess enzymes of glycogen metabolism
11:05-11:30	Yvan Rousset – Modeling glycogen: structure, metabolism and enzyme mechanistic
11:30-13:45	<i>Lunch + poster session</i>
Session II	Pathway dynamics <i>Session chairs: Hadjar Rahou, Kishore Krishnamurthy</i>
13:45-14:30	Grant Mitchell (remotely) – Inborn Errors of Coenzyme A (CoA) Metabolism
14:30-14:55	Christoff Odendaal – Personalised computational modelling of liver mitochondrial β -oxidation suggests a reduced risk of free CoA depletion as a rescue mechanism in MCADD
14:55-15:20	Eugenio Ferrario – <i>In vitro</i> reconstitution of NAD core metabolism
15:20-15:45	<i>Coffee break</i>
15:45-16:10	Siti Nurjanah – Glucose homeostasis and dietary effects in asymptomatic very long chain acyl-CoA dehydrogenase deficient mice (VLCADD-/-)
16:10-16:35	Chilperic Armel Foko Kuate – Computational modeling of the dynamics of lipid synthesis
16:35-17:00	Emmalie Jager – Interim results of the Fasting Tolerance in MCADD-Infants study (FiTtInG MCADD), an investigator-initiated, explorative pilot-study

Wednesday 30 March

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Session III	Combinatorial explosion of molecular species
	<i>Session chairs: Ghadeer Mobasher, Chilperic Foko Kuate</i>
9:00-9:45	Ronan Fleming – Combinatorial implosion via constraint-based modelling
9:45-10:10	Hadjar Rahou – Stoichiometric modularisation of combinatorial lipid modelling
10:10-10:40	<i>Coffee break</i>
10:40-11:05	Madhulika Singh – Quantitative and miniaturized assays for structure-resolved lipidomics in metabolic diseases
11:05-11:30	Flavio Bonanini – Human in vitro models of hepatic glucose production and novel liver-on-chip development
11:30-11:55	José Horcas – Liver organoids as a tool to study amino acid starvation in the context of hepatic dysfunction in malnutrition
12:15-14:15	<i>Lunch + poster session</i>
Session IV	Spatial and hierarchical regulation
	<i>Session chairs: Madhulika Singh, Evaldas Simanavicius</i>
13:45-14:30	Kathrin Thedieck – A stress granule protein integrates metabolic signals and controls lysosomal TSC recruitment and mTORC1 suppression
14:30-14:55	Ligia Akemi Kiyuna – Tissue-specific characterization of deoxy-glucose and palmitoyl-carnitine uptake in MCAD KO mouse under fasting and cold challenge
14:55-15:20	Maria Rodríguez Peiris – Distinct patient mutations in G6PC differentially affect the metabolic master regulator mTORC1
15:20-15:45	<i>Coffee break</i>
15:45-16:10	Hong Yang – Multi-omics analysis of tissue-specific metabolic crosstalk after CMA supplementation on rat NAFLD models
16:10-16:35	Kishore Alagere Krishnamurthy – Hepatic ChREBP knockdown aggravates hepatic glycogen accumulation and hypoglycemia while enhancing glycogen cycling in a mouse model for acute Glycogen Storage Disease type Ib
16:35-17:00	St. Elmo Wilken - Sensitivity of metabolic fluxes to thermodynamic and kinetic parameters revealed through differentiable constraint-based models
19:00	<i>Conference dinner</i>
	<i>Location: Brauerei Ferdinand Schumacher GmbH & Co KG, Oststraße 123, Düsseldorf</i>

Thursday 31 March

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Session V	Natural Language Processing for the Life Science
	<i>Session chairs: Hong Yang, Eugenio Ferrario</i>
9:00-9:45	Sophia Ananiadou (remotely) – Relation and Event Extraction from the Biomedical Literature
9:45-10:10	Ghadeer Mobasher – Enhancing Deep-Learning-based named entity recognition for biomedical applications via modified training
10:10-10:35	Annieke Venema - Value-based research: the repurposing of the drug empagliflozin for glycogen storage disease type Ib
10:35-11:00	<i>Coffee break</i>
11:00-12:00	Keynote 2: closing lecture <i>Session chairs: Maria Rodríguez Peiris, Christoff Odendaal</i> Thomas Hankemeier – Metabolomics: technologies for translational drug research and strategies for personalized health
12:00-12:15	Closure of symposium
12:15-13:00	<i>Lunch</i>