

Microbiome Meets Metabolism

Linking microbial biotransformations of chemicals to human and environmental health

PhD-students and Post-docs: join us for a 3-days interdisciplinary workshop at the top of Rigi Mountain to discuss the transformative power of microbiomes in shaping chemical structures and functions, vital for human and environmental well-being. This workshop bridges microbiology and bioinformatics with toxicology, pharmacology and environmental sciences, focusing on cutting-edge methodologies and data science tools. Participants will explore the intricate biotransformation processes in diverse microbiomes like the human gut and the environment and link those with microbiome composition analysis, thereby gaining practical insights and predictive skills. Scientific talks and teamworking sessions offer hands-on experience in data analysis, experimental strategies, and career development. Dive deep into understanding microbial metabolism's impact on ecosystems and human health, and equip yourself with essential tools for impactful research.

Organisers

PROF. DR. KATHRIN FENNER, Swiss Chemical Society, EAWAG and UZH PROF. DR. SHANA STURLA, Swiss Society of Pharmacology and Toxicology, ETH Zurich DR. GEORG AICHINGER, ETH Zurich CAROLINE REYMOND, Swiss Academy of Sciences (SCNAT), Platform Biology

Where and when?

The 3-days course takes place in the hotel Rigi-Kulm on top of the Rigi Mountain, one of the most scenic places in Switzerland, from the 2nd to 4th of February 2025.

Who can apply?

PhD students and Postdocs from all Swiss institutions of higher education. The workshop is aimed at students from all domain of biology, pharmacology and chemistry interested in this topic. MSc students' applications might also be considered.

Please contact your doctoral school for the accreditation of ECTS which we estimate between **1 and 1.5 ECTS**.

Registrations

The registration fee is CHF 150.– and includes housing and meals. Please register online and submit your abstract of research and a short letter of motivation by **30 September 2024**. The organising committee will select up to 30 outstanding applicants.



biol.scnat.ch/rigiworkshop25

Programme

Sunday, February 2

13.30	Opening/Introduction	
14.10	Talk 1 DR. SERINA ROBINSON, Pa	red omics analysis
15.00	Introductory workshop	
15.50	Coffee break	
16.20	Talk 2 PROF. DR. KRISTOPHER MC	NEILL, Microbial plastic degradation
17.10	Poster pitches	
19.00	Dinner	
20.45	Poster pitches	

Monday, February 3		
08.30	Talk 3 DR. GEORG AICHINGER, Microbiome-competent physiologically based kinetic modeling	
09.20	Talk 4 DR. MICHAEL ZIMMERMANN, Metabolic microbiome interactions	
10.10	Coffee break	
10.40	Talk 5 DR. MARIA ZIMMERMANN-KOGADEEVA, Quantifying microbiota-host interactions	
11.10	Selection of 5–8 research projects for 'world Café' workshop	
12.00	Lunch and free time	
15.30	Talk 6 PROF. EMILY BALSKUS, Chemical discovery in the microbial world	
16.20	Workshop: World Café on selected research projects	
19.00	Dinner	

Workshop (optional): Discussion: impact of research on policy, regulation and ingeneering

Tuesday, February 4

08.30 Talk 7

	PROF. PHILIPP ENGEL, Metabolic interplay between the honeybee gut microbiota and agrochemicals
09.20	Talk 8 PROF. NICHOLAS BOKULICH, Metagenome data analysis
10.10	Coffee break
10.40	Workshop: Metagenome data analysis
12.00	Lunch
13.00	Workshop (continuation)
14.45	Wrap-up/Reporting back
15.30	Closing remarks and evaluations
16.00	Departure