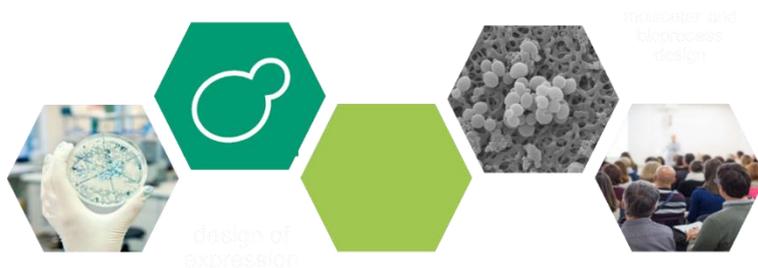


Program hands-on-pichia course

10th to 12th November 2022

Graz, Austria



Course content at a glance

The hands-on-pichia course will intensify your experience in the following:

- Designing of expression cassettes
- Strain design & genome engineering (including methanol-free inducible strains)
- Exploiting library technologies
- Applying screening concepts and methods
- Molecular and physiological strain characterization
- Computing feed strategies and designing process control schemes
- Bioprocess data evaluation
- Understanding factors affecting product quality and quantity

Organizers

The hands-on-pichia course 2022 is organized by the “Christian Doppler Laboratory for Innovative *Pichia pastoris* Host and Vector systems” at the TU Graz.



Supporters



*A special thanks to our supporters, who join us as course specialists.

Course program

P	Presentations	W	Workshops	L	Laboratory sessions
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Day 1

Thursday, 10 th of November			
08:30 – 08:45		Good morning coffee and registration	15 min
08:45 – 10:45		SESSION 1: Introduction	
	P	<i>Opening, course structure, and goals</i>	45 min
	P	<i>Introduction to Pichia pastoris</i>	75 min
10:45 – 11:00		Coffee break	15 min
		SESSION 2: Host strain engineering	
11:00 – 12:30	W	<i>CRISPR genome editing</i>	60 min
	W	<i>“Clean knock-outs”: Recombinase (Flp/FRT, Cre/Lox, and mating of Pichia pastoris strains</i>	30 min
12:30 – 13:45		Lunch	60 min
		SESSION 3: Host strains	
13:45 – 15:15	P	<i>Host strains basic information</i>	30 min
	L	<i>Meet Pichia in the lab</i>	60 min
15:15 - 15:45		Coffee break	30 min
		SESSION 4: Expression strategies	
15:45 – 17:30	P	<i>The Pichia pastoris toolbox</i>	30 min
	L	<i>Regulation of gene expression and product formation</i>	75 min
18:00		Dinner	

Day 2

Friday, 11th of November			
08:45 – 09:00		Good morning coffee	15 min
09:00 – 09:30		Debriefing <i>What did we do yesterday? Take home messages!</i>	30 min
09:30 – 10:15	W	SESSION 5: Design your expression strategy	120 min
10:15 – 10:30		Coffee break	15 min
10:30 – 12:30		SESSION 6: Screening and analysis of production clones	
	P	<i>Screening and analysis of production clones</i>	30 min
	L	<i>Methods for product analysis</i>	90 min
12:30 – 13:30		Lunch	60 min
13:30 – 17:15		SESSION 7: Pichia products and success stories	
	P	<i>Pichia success stories</i>	30 min
	W	<i>Break-out session – Ask your Pichia expert!</i> 1. <i>Bioinformatics and Genome engineering Gerhard Thallinger</i> 2. <i>Expression vectors – Toni Glieder</i>	45 min
		Coffee break	15 min
	P	<i>Metabolite production in Pichia - terpenoids</i>	30 min
	W	<i>Break-out session – Ask your Pichia expert!</i> 1. <i>Bioprocess engineering and feeding strategies – Xavier Ortega</i> 2. <i>IP and product registration/approval – Anton Glieder</i> 3. <i>Small molecules and synthetic biology – Anita Emmerstorfer-Augustin</i>	45 min
18:15 19:30		Walking tour of the Graz Old town Dinner in Old town	

Day 3

Saturday, 12th of November			0
08:30		Bus transfer to Gleisdorf (20 min driving time)	
		SESSION 8: Pichia fermentation	
09:00 – 10:30	P	<i>Introduction to Pichia fermentation</i>	90 min
10:30 – 10:45		Coffee break	
10:45 – 12:45	L	<i>From small-scale to bioreactor cultivation</i>	120 min
12:45 – 14:15		Lunch break	
14:15 – 14:45	W	Debriefing <i>What did we do yesterday? Take home messages!</i>	30 min
14:45 – 15:00		Coffee break	
15:00 – 16:30	W	SESSION 9: Design your expression strategy: Case studies	90 min
16:30		Closing remarks	
17:00		Bus transfer back to Graz (20 min driving time)	