

Training school: Utilization of short chain fatty acids for lipid production

Venue: Faculty of Biotechnology and Food Science, Wroclaw University of Environmental and Life Sciences

Date: 05-07.07.2023

Aims and objective: This training is dedicated to graduate and post-graduate level researchers whose research focuses on the utilization of carbon sources alternative to sugars. The course will provide: I) introduction to volatile fatty acid metabolism (biosynthesis and utilization); II) genetic engineering tools dedicated to non-conventional yeast focused on improvement of SCFAs utilization; III) practical experience in extraction and analysis of intracellular metabolites; IV) planning experiments and optimizing the process using statistical methods.

Programme Schedule

5th July, Wednesday, Faculty of Biotechnology and Food Sciences, UPWr, 37 Chelmonskiego St.

9:00-9:30 Registration
9:30-11:00 Introductory lecture: Biosynthesis of short chain fatty acids and the opportunities in their utilization for lipid production by non-conventional yeast
11:00-11:15 Coffee break
11:15-12:00 Biosynthesis of lipids and lipid derivatives by *Yarrowia lipolytica*
12:00-13:00 Lunch break
13:30-17:30 Introduction and practical training in intracellular metabolite extraction and analysis (Department of Food Chemistry and Biocatalysis, UPWr, 25 Norwida St.) (14:30-15:00 Coffee break)

6th July, Thursday, Faculty of Biotechnology and Food Sciences, UPWr, 37 Chelmonskiego St.

9:00-10:15 New chromogenic plasmid set for heterologous protein expression in *Yarrowia lipolytica*
10:15-10:45 Coffee Break
10:45-12:00 Golden Gate based vectors for genetic engineering of yeast
12:00-13:00 Lunch break
13:00-17:00 Practical training in plasmid preparation and bacteria and yeast cloning (14:30-15:00 Coffee break)

7th July, Friday, Faculty of Biotechnology and Food Sciences, UPWr, 37 Chelmonskiego St.

9:00-10:00 Analysis of the obtained transformants
10:00-10:30 Coffee break
10:30-12:00 Introduction to statistical methods in experimental design
12:00-13:00 Lunch break
13:00-17:00 Practical training in experimental design (14:30-15:00 Coffee Break)

Course providers: Prof. Jean-Marc Nicaud, Dr. Elia Tom s-Pej , Prof. Ewelina Celińska, prof. Wojciech Łaba, Dr. Jarosław Popłoński, Prof. Zbigniew Lazar

Deadlines:

09.06.2023 – Submission of applications

16.06.2023 – Selection and announcement of participants

How to apply:

Applicants should send an email to info@yeast4bio.eu and attach in one single document:

- A cover letter with a statement of interest of up to one page.
- Short CV

Additional information: Language: English / Number of participants: 16 reimbursed / No registration fee /

Trainees can be reimbursed for their long-distance travel expenses in line with the COST eligibility rules. The reimbursement covers the incurred accommodation, meals, and local travel expenses. Trainees eligible for reimbursement:

- Trainees from COST Full Members / COST Cooperating Member participating in the Action.
- Action MC Observer from NNC participating in the Action.
- Trainees from Approved European RTD Organizations participating in the Action.

COST Policy and Rules, in particular the Excellence and Inclusiveness Policy will be considered when selecting the participants. Suggestions for accommodation will be provided to the selected applicants upon confirmation of participation in the course.

Acknowledgements



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