Training School: Metabolite profiling of non-conventional yeasts, including lipids (carotenoids) by U/HPLC-PDA and GC-MS

Venue: Royal Holloway University of London and Imperial College London

Dates 7th September to 9th September 2022

Aims and objectives of the course: The course is directed towards ECI and postgraduate (PhD) level where their research projects would benefit from metabolite profiling technology. The course will (i) provide an overview of the Metabolite profiling approaches used in the characterisation of yeast diversity and metabolic biology and (ii) first hand practical experience in the extraction of metabolites, chromatographic separations and detection methods (e.g. analytical platforms) and overview of data analysis resources.

Course providers: Dr Marilise Nogueira, Dr Harriet Berry, Prof Gerhard Sandmann, Prof Rodrigo Ledesma Amaro and Prof Paul Fraser.

Programme Schedule

7th September, Wednesday, Royal Holloway University of London:

- 9.00 – 9.30 Registration and coffee (Bourne Foyer)
- 9.30 – 10.30 Introductory lecture: "Principles of chromatography and analysis of lipids and metabolites" by Prof. Gerhard Sandmann, University of Frankfurt. (Bourne lecture theatre 2 – BLT2)
- 10.30 – 11.00 Coffee break (Bourne Foyer)
- 11.00 – 12.00: Lab tour and demonstration of flash chromatography and cell breakage
- 12.00 – 13.00: Lunch break (Bourne Foyer)
- 13.00 – 17.00 Practical course part 1: Extraction and derivatization for metabolite profiling of *Xanthophyllomyces*, and of *Rhodotorula*, preparation of samples for GC-MS and U/HPLC-PDA plus UV/Vis spectroscopy.
- Tea break at 15:00 – 15:30 (Bourne Foyer).

8th September, Thursday, Royal Holloway University of London:

- 09.00 – 13:00: Practical course part 2 (Instrument rooms): Running samples on the U/HPLC-PDA and GC-MS.
- 10.30 – 11.00: Coffee (Bourne Foyer)
- 13.00 – 14.00: Lunch break (Bourne Foyer)
- 14.00 – 16.00: Bourne teaching lab – 303, Data analysis and wrap up.
- Tea break at 15:00 – 15:30 (Bourne Foyer)

9th September, Friday (at Imperial College) via bus transfer in the morning

- 9.30 – 10.45 Bus transfer Egham to Imperial College

Symposium on high value metabolites from non-conventional yeasts.

- 11.30 – 12.30 Two 30 mins expert talks
- 12:30 - 13:30 Lunch break
- 13:30 – 14.30 Two 30 mins expert talks
- 14.30 – 16.00 Flash presentations from the trainees

Deadlines:

31st July – Submission of applications

5th August – 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: 14 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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