Workflow4Experimenters 2023

Overview

Processing, **statistical analysis**, and **annotation** of **metabolomics data** is a complex task for **experimenters** since it involves many steps and requires a good knowledge of both the **methodology** and **software** tools. The Workflow4metabolomics.org (**W4M**) online infrastructure provides a user-friendly and high-performance environment with advanced computational modules for building, running, and sharing **complete workflows for LC-MS, GC-MS, FIA and NMR analysis**. Such features are of major values for teaching computational metabolomics to experimenters, and previous courses using W4M since 2014 have been very successful.

For this new session, format changes:

- From 06 to 10/03: theoretical sessions in videoconference from 10am to 12pm
- From 20 to 24/03: practical sessions with the 1st hour of each day dedicated to short reminders and participant questions (following the theoretical session).

Pre-Registration: form (deadline 31/12/2022)

Goals: During this course, participants will learn how to use the W4M infrastructure to analyze **their own dataset**. Online sessions will be dedicated to **methodology and tools**. Face-to-face sessions will be devoted to **tutoring**. For these practical sessions, the participants will work on their own data (prerequisite for the training is to have a data set).

Date:

- from March, Monday 6 to Friday 10 2023: 10-12 am (Paris hour): theoretical sessions
- from March, Monday 20 (lunch time) to Friday 24 (lunch time) 2023: practical sessions

Costs: 1200€ for academic and **2500 € for private institution** (to cover expenses for trainers, organization, materials and meals)

Including: Lunch, coffee break, pedagogic support and the Thursday social event

Not included: travel expenses, accommodation and 3 diners (Monday, Tuesday, Wednesday)

Target audience: LC-MS, GC-MS, NMR, FIA-MS and DI-MS experimenters (e.g. biologists, chemists).

Materials: Participants will use their laptop to perform the analysis on their W4M account. All presentations, reference datasets and workflows will be available online.

Invited speaker: Helge Hecht (Masaryk University, République Tchèque)

Tutors: Each participant will be paired with a duo of tutors (preprocessing / statistics experts) who will help him/her preparing data and assist him/her during each analysis step.

Location: Institute of Complex Systems, Paris (France)

Language: English

Number of attendees: 25 max.

Sponsors: ELIXIR, French Bioinformatics Institute (IFB), French Infrastructure for Metabolomics and Fluxomics (MetaboHUB), Francophone Network for Metabolomics and Fluxomics (RFMF)

Program

Webinars

Start	End	MONDAY 6th March	TUESDAY 7th March		WEDNESDAY 8th March	THURSDAY 9th March		FRIDAY 10th March
08:30	09:00							
09:00	09:30							
09:30	10:00							
10:00	10:30	Introduction	[MS] Data Preprocessing **M. Pétéra / Y. Guitton**	[NMR] Data Preprocessing **C Canlet / M. Tremblay-Franco**	Statistical analysis **M. Pétéra / M. Tremblay-Franco**	[MS] Annotation **Y. Guitton / R. Weber**	[NMR] Annotation **C. Canlet**	Parallel sessions
10:30	11:00	Galaxy session : initiation and data management **M. Pétéra / Y. Guitton / G. Le Corguillé**						
11:00	11:30							
11:30	12:00		Signal Drift and Batch-Effect Correction - **M. Pétéra**					
12:00	12:30							
12:30	14:00							
14:00	14:30							
14:30	15:00							
15:00	15:30							
15:30	16:00							
16:00	16:30							
16:30	17:00							
17:00	17:30							
17:30	18:00							
18:00	18:30							
18:30	19:00							
19:00	19:30							
19:30	20:00							
20:00	20:30							

Practicals

Start	End	MONDAY 20th March	TUESDAY 21th March		WEDNESDAY 22th March	THURSDAY 23th March		FRIDAY 24th March
08:30	09:00		[MS] Data Preprocessing	[NMR] Data Preprocessing	Statistical analysis	[MS] Annotation MS and MSMS	[NMR] 1D and 2D Annotation	Parallel sessions
09:00	09:30							
09:30	10:00		Tutoring	Tutoring	Tutoring	Tutoring	Tutoring	
10:00	10:30							
10:30	11:00		*Break*		*Break*	*Break*		*Break*
11:00	11:30		Tutoring	Tutoring	Tutoring	Tutoring	Tutoring	Week debrief and Survey
11:30	12:00		Signal Drift and Batch-Effect Correction					
12:00	12:30		Tutoring					
12:30	14:00	*Welcome and buffet lunch*	*Buffet lunch*		*Buffet lunch*	*Buffet lunch*		*Lunch boxes*
14:00	14:30	Introduction and round table	Tutoring		Tutoring	Tutoring	Tutoring	
14:30	15:00	Galaxy session						
15:00	15:30	Tutoring						
15:30	16:00							
16:00	16:30	*Break*	*Break*		*Break*	*Break*		
16:30	17:00	Tutoring	Tutoring		Tutoring	Tutoring	Tutoring	
17:00	17:30							
17:30	18:00							
18:00	18:30							
18:30	19:00							
19:00	19:30							
19:30	20:00					*20h00 - Social event : Gala dinner*		
20:00	20:30							

Scientific committee

Université Libre de Bruxelles : Cédric Delporte, Florence Souard
ELIXIR-France (IFB) : Gildas Le Corguillé
MetaboHUB : Marie Tremblay-Franco, Mélanie Pétéra, Cécile Canlet, Binta Diemé, Franck Giacomoni, Yann Guitton and the W4M coreteam
IRBA (Institut de Recherche Biomédicale des Armées) : Céline Dalle

For any requests, please contact the team: contact * AT * workflow4metabolomics.org

See you soon in Paris !