

Workshop on enzymatic production of prebiotics for food and cosmetics

December 5 and 6, 2023

Faculty of Technology and Metallurgy, Karnegijeva 4, Belgrade

Event organized by projects

TwinPrebioEnz and PrIntPrEnzy

with lecturers from

Faculty of Technology and Metallurgy, University of Belgrade (FTM)

Spanish National Research Council (CSIC), Madrid, Spain

Radboud University Medical Center (RadboudUMC), Nijmegen, Netherlands

Maastricht University (MU), Maastricht, Netherlands



Prior registration is required by sending an electronic application to the address

dbez@tmf.bg.ac.rs with the subject: Application for the workshop.

Applicant should state if she/he wants to attend only lectures or lectures and lab activities.

	TOPIC	Time (CET)	Speaker
TUESDAY 05.12.2023.			
Enzymatic processes for prebiotic production			
	Opening and welcome	9:00 - 9:10	Dean of FTM
	Introduction	9:10 – 9:20	D. Bezbradica (FTM)
1	The role of enzymes in utilization of by-products of food industry	9:20 – 10:30	D. Bezbradica (FTM)
	Coffee break	10:30 - 11:00	
2	Technologies in enzyme modification as tool for prebiotic production	11:00 - 12:00	J.M. Palomo and C. Mateo (CSIC)
3	Process intensification for food prebiotics	12:00 – 13:00	N. Nikačević (FTM)
	Lunch	13:00 – 14:00	



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Afternoon session – Lab - Process intensification of prebiotics production			
4	<ul style="list-style-type: none"> • Design and 3D printing of bioreactors and GOS synthesis in 3D printed reactor. • FOS synthesis in batch reactor or (air-lift reactor) with immobilized enzyme. • Simultaneous enzymatic synthesis and purification of FOS in nanofiltration membrane module. • HPLC analysis of FOS and GOS (column for sugar separation and RI detector) 	14:00 – 17:00	
WEDNESDAY 06.12. 2023.			
Structural characterization of prebiotics and determination of effects on human microbiota			
1	Herbal extracts as source of prebiotics	9:00 – 10:00	M. Rajilić-Stojanović (FTM)
	Coffee break	10:00 - 10:30	
	Laboratory: <ul style="list-style-type: none"> • Instrumental analysis of HPLC analysis of herbal extract 	10:30-11:30	
2	Expanding Horizons in Carbohydrate In Vitro Digestibility: Unveiling Novel Pathways Beyond α -Amylases and Starch.	11:30 – 12:15	O. Hernandez-Hernandez (CSIC)
3	Laboratory: <ul style="list-style-type: none"> • HPLC analysis of XOS (C18 column, sugar derivatization and DAD detector) 	12:15 - 13:15	
4	The chemical features of dietary fibres with prebiotic potential - why is it important?	13:15 – 14:00	K. Abboud-Youssef (MU)
	Lunch	14:00 – 15:00	
5	Experimental models, molecular targets and readout parameters for skin health as tools for selection of skin prebiotics	15:00 – 16:00	E. van den Bogaard, P. Janssen, N. van Hout (RadboudUMC)
6	Laboratory: Analyses of prebiotic activity <ul style="list-style-type: none"> • Analysis of skin prebiotic activity with callus skin model 	16:00 – 18:00	

