

## WORKSHOP

### **Vibrational spectroscopy and biomimetic membranes for understanding protective mechanisms of oligosaccharides**

#### Description

A better understanding of the mechanisms of microorganisms' preservation by oligosaccharides is one of the main objectives of the PREMIUM project (H2020, MSCA 777657).

In the frame of this project, ICFO is organising a workshop in collaboration with the other seven partners of the consortium (INRAE, AgroParisTech, University of Coimbra, University of Madeira, CONICET, Biosearch Life and Cytiva).

The objective is to share knowledge on two approaches developed in PREMIUM:

- Vibrational spectroscopy (FTIR and Raman) to study the modification of the cell components induced by oligosaccharides added as protective agents before preservation processes (freezing and drying)
- Biomimetic membranes and molecular dynamics simulations to focus on the cell membrane structure and organisation and the interactions with such protective molecules

This workshop is an opportunity for sharing PREMIUM results and connecting with scientists working on these topics.

If you wish to attend, please contact Fernanda Fonseca [fernanda.fonseca@inrae.fr](mailto:fernanda.fonseca@inrae.fr) to receive a connexion link.

#### **AGENDA**

**12:00\_Welcome**

**12-15-13h45\_Vibrational spectroscopy session**

12h15\_**Prof. Anna de Juan**\_ Multivariate curve resolution developments and related methods and applications to the study of bioanalytical processes, image analysis and general analytical applications. (35 min + 10 min for questions)

13h00\_**Dr. Cuauhtémoc Araujo-Andrade**\_ The application and use of vibrational spectroscopies, includes: studies on microorganisms and bacterial biofilms (15 min + 5 min for questions)

13h20\_**Dr. Monica Marro**\_ Exploiting Raman spectroscopy and multivariate analysis for biomedical applications and the investigation on the protective effect of FOS during vacuum-drying of LAB (15 min + 5 min for questions)

**13h45-14h30\_Lunch/coffee break**



H2020 - RISE - 2017



### 14h30-16h00\_Biomimetic membranes session

14h30\_Prof. Pedro Simões\_ Molecular simulation of biomembrane models(35 min + 10 min for questions)

15h15\_Dr. Elizabeth Tymczyszyn\_ Interaction of Galacto-oligosaccharides mixtures with membranes (15 min + 5 min for questions)

15h35\_Dr. Fernanda Fonseca\_ Development of simplified lipid models representing the membrane of LAB to study the specific interaction between oligosaccharides and lipids (15 min + 5 for questions)

16h00-16h15\_Coffee break

### 16h15\_17h30\_Poster session

Flash presentations (5-6 min) followed by exchanges in each poster's room with the speaker

17h30\_ Meeting closure

## PREMIUM Consortium

