

# Tuesday November 3rd

Time Zone Europe/Brussels | GMT/UTC +1

09:00 →

Welcome Talk

| **Franco Ongaro, ESA-ESTEC director**

09:15 →

MELiSSA in Belgium

| **Pierre Coquay, BELSPO**

09:30 →

MELiSSA activities in Switzerland

| **Oliver Botta, Swiss Space Office**

09:45 →

ASI Life Support Activities

| **Marino Crisconio, ASI**

10:00 →

MELiSSA state of the art and perspective of ESA

| **Christophe Lasseur, MELiSSA Project**

10:30 →

Break

10:45 →

Introduction to the Human Spaceflight Program in China

| **Gongling Sun, International Space University**

11:15 →

ECLSS Russian activities

| **Pr Ilyin, IBMP, Moscow**

11:45 →

Status and Future plan of JAXA microbial monitoring from ISS and beyond

| **Toru Shimazu, Japan Space Forum**

12:15 →

The Role of Plants as Food and Life Support for Exploration

| **Ralph Fritsch & Lucie Poulet, NASA**

12:45 →

Lunch

## Room 1

### Edible Biomass Production

13:30 →

PACMAN project: Designing, building and testing the prototype of a Plant Characterization Unit

| **Claudia Quadri, Lorenzo Buccchieri, EnginSoft**

14:00 →

P, K, Mg, Ca, Na balances in a closed system combining aeroponic lettuce cultivation supplied with grey water

| **Kamil Janiak, Wroclaw University of Science and Technology**

14:15 →

Lunar Nutritional Grower (LuNG): Assessing the viability of a lunar hydroponic system

| **Saad Rayees & Sebastian Garcia, MSE TU Berlin**

14:30 →

Optimization of a controlled environment food production unit for space applications

| **Thomas Bartzanas, Agr. University of Athens**

14:45 →

Improved lettuce yield and quality by microbial treatments in vertical farming

| **Thijs Van Gerrewey, Ghent University**

15:00 →

Coffee break

### Edible Biomass Production

15:30 →

Plant gas exchange mechanistic modeling taking into account multiple timeframes and gravity levels.

| **Lucie Poulet, NASA**

## Room 2

### Edible Biomass Production

EBIOS: an approach to build bioregenerative life support system for terrestrial and planetary application

| **Barbara Belvisi, Insterstellar**

Development status of the nutrient delivery system of PFFU, Precursor of a microgravity Food Production Unit

| **Giorgio Boscheri, Thales Alenia Space**

Microgravity mimetics on the development of multifunctional bioreactors systems for efficient cell growth

| **Ayse Kose, Ege University Bioengineering Department**

PRIAM: A compact intensified artificial light photobioreactor adapted to life support for human space exploration

| **Charlene Thobie, Brochier Technologies**

Design of a module for cultivation of tuberous plants in space: the PROJECT "PRECURSOR OF FOOD PRODUCTION UNIT" (PFFU)

| **Roberta Paradiso, University of Naples Federico II**

### Societal impacts and education

Challenges for a MELISSA deployment on Earth

| **Paola Leoni & Antonio Piccirillo, Leoni Corporate**

16:00 →

Can microgreens serve as fresh food in space or are space conditions too harsh?

| **Nele Horemans, SCK-CEN**

The SEMiLLA Platform as a means to create environments to develop the Circular Economy concept.

| **Clara Plata, SEMiLLA IPStar**

16:15 →

Microbial fuel cells with peroxide production for blackwater treatment

| **Sudeep Popat, Clemson University**

Mission to Mars inspires food project in the Democratic Republic of the Congo

| **Felice Mastroleo, SCK-CEN**

16:30 →

Microbes in Hydroponic Crop Cultivation in Space

| **Danny Geelen, Ghent University**

IGLUNA 2020 - A Space Habitat - MELiSSA POMP Team - Cyanobacteria and higher plant production on recycled urine

| **Grace Margaret Crain, ETH Zurich Group of Plant**

16:45 →

Seed orientation affects seedling development in hardware for experiments in space

| **Giovanna Aronne, University of Naples Federico II, Department of Agricultural Sciences**

Philosopher's journey into MELiSSA

| **Segolene Guinard, Université Paris 8 Vincennes Saint-Denis**

17:00 →

In-Situ resources bio-utilisation for Life Support Systems (REBUS)

| **Stefania De Pascale, Dept. of Agricultural Sciences - University of Naples Federico II**

The MELiSSA Foundation and the future of ESA sponsored LSS research via the Pool of MELiSSA PhD (POMP project)

| **Max Mergeay, MELiSSA Foundation**

17:15 →

Hydroponic nutrient solution monitoring for crop characterization

| **Øyvind Mejdell Jakobsen, CIRIS, NTNU Social Research**

Questioning the future through a fiction science graphic novel

| **Schmitt Didier, ESA**

17:30 →

Conclusion of the day (5min)

| **Christophe Lasseur, MELiSSA Project**