

MULTI-ORGANISMIC INTERACTIONS IN THE MICROBIOME AND SELF-SUSTAINABILITY OF HEALTH

PANEL DISCUSSION

Date 25.10.2024
Session Time 16:20 - 17:20
Room Modulo 0

Chair(s):

- Duccio Cavalieri (Italy)
- Elicora Ron (Israel)

Session description

We are walking halobionts. The Microbiome is essential for human and plant health and is involved in many processes in the human body, such as the metabolism process and immune system activation. Emerging evidence imply that specific changes in the microbiome participate in the development of various diseases, including diabetes, liver diseases, tumors, and pathogen infections. The microbiome involves the interaction of different kingdoms, including the cells of the host, the immune system of the host, bacteria, yeasts, archea and viruses. Recent studies suggest that mammals and their individual gut symbionts can have parallel evolutionary histories, as represented by their congruent phylogenies. These "co-phylogenetic" patterns are signatures of ancient co-speciation events and illustrate the cohesiveness of the mammalian host-gut microbiome entity over evolutionary times.

Panelists:

- Luisa Lanfranco (Italy)
- Paul Young (Australia)
- Marco Ventura (Italy)

Goals of the panel discussion

- a) Microbiomes and host fitness
- b) Processes that drive the evolution of host-microbiome systems
- c) The Holobiont theory of Evolution in Plants and humans
- d) Microbiomes and mycobiomes in health, disease, pregnancy, and aging
- e) Cross kingdom interactions and one health approaches.