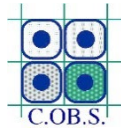


The international summer school on “**Advanced Biotechnology**” is organized yearly by the members of the Biotechnet Switzerland in collaboration with the Master In Applied Biotechnology, BIRS, at the University of Palermo.

The XVII edition of the School will take place in the splendid setting of the Palermo’s Botanical Garden, with the sponsorship of the Department of Biological, Chemical and Pharmaceutical Sciences and Technologies – STEBICEF, The Experimental OncoBiology Center – C.O.B.S., the University Museum System – SIMUA, the INFORM HT and the ThermoFischer Scientific.



Organizing Committee

Vincenzo Cavalieri - UNIPA
 Salvatore Feo - UNIPA
 Giuseppe Gallo - UNIPA
 Giulio Ghersi - UNIPA
 Jack Rohrer - ZHAW
 Sonia Thompson - FHNW
 Thomas Villiger - FHNW

Contact & Information

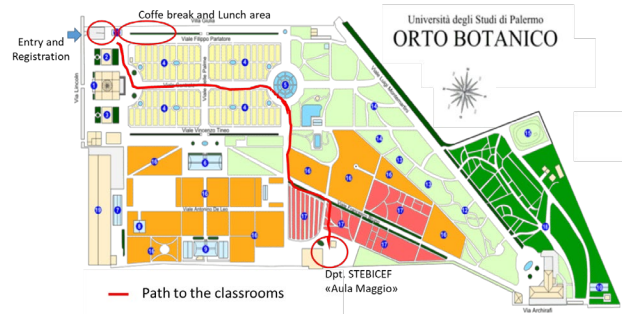
salvatore.feo@unipa.it
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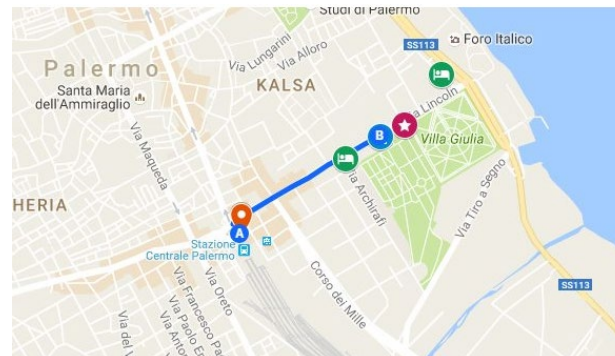
Venue: UNIPA, Orto Botanico, Via Lincoln 2



How to reach Orto Botanico

From Falcone Borsellino airport you can reach the main train station of the city (Palermo centrale) by :

- Prestia and Comandè bus (bus stop is outside the airport, 50 meters to the right)
- from Central Railway Station you can reach Hotel Villa Archirafi, Botanical Garden and NH Hotel along Via Lincoln.



XVII Summer School on Advanced Biotechnology

September 4 - 6, 2023

Orto Botanico
Palermo, Italy

Preliminary program



Organized by

- FHNW (Switzerland)
- HES-SO (Switzerland)
- MCI (Austria)
- UNIPA (Italy)
- ZHAW (Switzerland)



Monday 4

08:30 Registration
09:00 Welcome and Opening remarks

09:20 -10:20 **Green Biotechnology**
Chair: Christoph Griesbeck, MCI

Christoph Griesbeck

Microbial solutions to address plastic pollution

Wolfgang Merkle

Optimization of ex-situ biomethanation and evaluation of medium components

Simon Crelier

Anaerobic digestion of organic waste for biogas production

10:20 **Coffee break**

11:00 12:30 **Green Biotechnology**
Chair: Jack Rohrer

Francesca Demaria

Title to be announced

Limon Juan

Estimation of biomass in microalgae cultivations via Impedance spectroscopy

Harald Schoebe

Shed light on photosynthetic organisms: Light as a tool in biotechnology

Andreas Walter

Microbial solutions to address plastic pollution

Workshop: Committee Communciations

12: 30 **Lunch**

14:00 – 15:00 **Food Biotechnology**
Chair: Raffaella Boggia

Arash Sagehi-Mehr

A plant-based alternative to yogurt: Effect of fermentation on pea protein

Raffaella Boggia

Valorization of fishery unsorted side streams: a case study

Nicolas Huguenin-Dezot

Biosynthesis and genetic encoding of phosphonates in E. coli

15:00 **Coffee break**

16:00 – 17:00 **Applied Biotechnology**
Chair: Valeria Alduina

Nicolas Huguenin-Dezot

Biosynthesis and genetic encoding of phosphonates in E. coli

Rosa Alduina

Molecular approaches to activate secondary metabolite biosynthesis in Actinomycetes

Lucia Colleselli

Bling-bling by MOs: Biological Synthesis of nanoscaled metallic particles

Tuesday 5

09:00 – 10:20 **Biopharmaceutical Biotechnology**
Chair: Thomas Villiger

Ying Liu

Cell Line Development for Biomanufacturing – Challenges and potentials

Alina Adler

Transgenes characterization in Pichia strains used for bioproduction

Simona Campora

Functionalized nanoparticles as delivery system for solid tumours treatment

Thomas Villiger

Continuous Bioprocesses: From antibodies to viral vectors

10:20 **Coffee break**

11:00 – 12:30 **Drug Development and Drug Delivery**
Chair: Jack Rohrer

Vincenzo Cavalieri

Exploring Potential Therapeutic Effects of Secretome from Mesenchymal Stem Cells using Zebrafish

Laurent Counillon

Membranes, transporters and channels from basic science to pharmacology and biotechnology

Christoph Borner

How fungi and viruses exploit cell death mechanisms to cause human diseases

Jack Rohrer

How do we get drugs into the brain ?

12:30 **Lunch**

14:00 -15:00 **Biotechnology applications**
Chair: Organizing Comitee

INFORS

Title to be announced

THERMO FISCHER

Title to be announced

Final information and guideline, for elevator pitch

15:00 **Coffee break**

16:00 – 17:00 **Presentations**

Wednesday 6

09:00 – 10:20 **Drug Delivery and Nanotechnology**
Chair: Jack Rohrer

Patrick Shahgaldian

In Silica Protein Engineering towards Nanobiotechnology and Nanomedicine

Otto Maike

Development of Theragnostic Nanobody-Polymer-Conjugates Targeting B7H3

Patrizia Cancemi

Organ-on-Chip: a potential alternative to traditional animal testing

Luciana Migliore

Misdeeds at the Vatican Secret Archives: the case of the purple spots damaging the Laurentius Loricatus parchment roll

10:20 **Coffee break**

11:00 – 12:20 **Diagnostic and Anyltical Technology**
Chair: Eric Kubler

Andrea Bieder

Organoid-based in vitro pharmacological assays

Alexandre Kuh

Improved molecular diagnostic based on long read DNA sequencing

Eric Kübler

Antibiotic Resistance – similia similibus examintur

Claudia Modica de Mohac

Bio-hybrid cardiac patch to prevent left ventricle pathological remodeling

12:30 **Lunch**

14:00 15:00 **Diagnostic and Anyltical Technology**
Chair: Giuseppe Gallo

Francesco Lo Presti

Organ-on-Chip: a potential alternative to traditional animal testing

Giuseppe Gallo

The actinobacteria Streptomyces violaceoruber and Kocuria rhizophila showing plant-growth promoting activity on Solanum lycopersicum

Dasen Gottfried

«How dead is dead ?» - Killing of bacteria

15:00 **Prize Cerimony**