

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

The workshop will take place in the splendid setting of the Palermo Botanical Garden, with the sponsorship of the Department of Biological, Chemical and Pharmaceutical Sciences and Technologies –STEBICEF and the University Museum System – SIMUA.



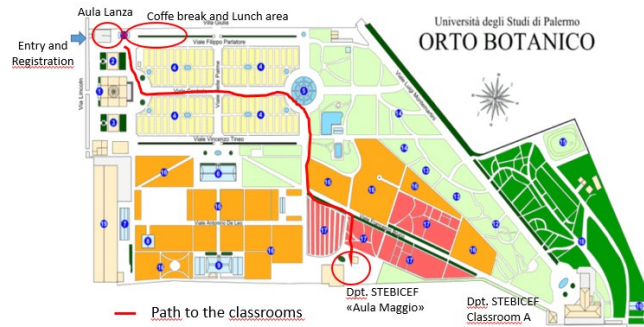
### Organizing Committee

Vincenzo Cavalieri  
Salvatore Feo  
Giuseppe Gallo  
Giulio Ghersi  
Sonia Thompson  
Thomas Villiger

Contact & Information  
[salvatore.feo@unipa.it](mailto:salvatore.feo@unipa.it)

<https://www.unipa.it/dipartimenti/stebicef/summer-school/>

Venue: UNIPA, Orto Botanico, Via Lincoln 2

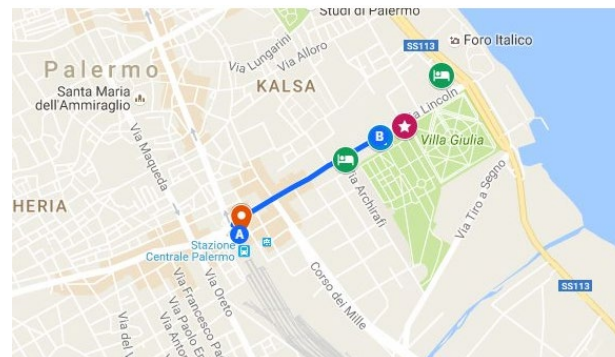


How to reach Orto Botanico

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 3-6, 2023

Orto Botanico  
Palermo, Italy

### Provisional program



### Organized by

- FHNW (Switzerland)
- HES-SO (Switzerland)
- MCI (Austria)
- Università degli Studi di Palermo (Italia)
- ZHAW (Switzerland)



# Monday 4

**08:30**            **Registration**  
**09:15**            **Welcome and Opening remarks**

**09:30 -10:30**    **Medical Biotechnology**  
                    **Chair: Laura Suter-Dick**

**Jack Rohrer**  
How do we get drugs into the brain ?

**Andrea Bieder**  
Organoid-Based in vitro pharmacological assays

**Eric Kubler**  
Title to be announced

**10:30**            **Coffee break**

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

**Laura Suter-Dick**  
Title to be announced

**Laura Lentini**  
Targeting Nonsense: Rescue of CFTR Expression and  
Functionality in Cystic Fibrosis Cell Model Systems by TRIDs

**Thomas Villiger**  
Continuous Bioprocessing: From antibodies to viral  
vector

**Valeri Vetri**  
Peptide-membrane interactions monitored by quantitative  
fluorescence microscopy

**12:30**            **Lunch**

**14.30 – 17:00**   **Industrial and Environmental Biotechnology**  
                    **Chair: Simon Crelier**

**Christoph Griesbeck**  
Title to be announced

**Wolfgang Merkle**  
Optimization of ex-situ biomethanation and evaluation of  
medium components

**Giorgio Mannina**  
Advances in water resource recovery from wastewater  
treatment: roadmapping the transition to circular economy

**17:30**            **Welcome Party**

# Tuesday 5

**09:30 – 10:30**   **Microbial Biotechnology**  
                    **Chair: Harald Shobel**

**Aline Adler**  
Title to be announced

**Elena Piacenza**  
Application of biogenic nanomaterials: a biotechnological  
perspective

**Nicolas Huguenin-Dezot**  
Biosynthesis and genetic encoding of phosphonate in *E. Coli*

**10:30**            **Coffee break**

**11:00 – 12:30**   **Microbial Biotechnology**  
                    **Chair: Christoph Griesbeck**

**Sven Panke**  
Title to be announced

**Juan Limon Petersen**  
Estimation of biomass in microalgae cultivation via  
impedance spectroscopy

**Simon Crelier**  
Anaerobic digestion of organic waste for biogas  
production

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

**12:30**            **Lunch**

**14:30 -17:00**    **Biotechnology applications**  
                    **Chair: Elena Piacenza**

**Luciana Migliore**  
Title to be announced

**Raffaella Boggia**  
Valorization of fishery unsorted side stream: a case  
study

**Alexandre Kuhn**  
Improved molecular diagnostic based on long read DNA  
sequencing

# Wednesday 6

**09:30 – 10:30**   **Microbial Biotechnology**  
                    **Chair: Giulio Gherzi**

**Arash Sadeghi-Mehr**  
A plant-based alternative to yogurt: Effect of  
fermentation on pea protein

**Andreas Walter**  
Microbial solutions to address plastic pollution

**Laurent Coutillon**  
Title to be announced

**10:30**            **Coffee break**

**11:00 – 12:30**   **Biotechnology applications**  
                    **Chair: Thomas Villiger**

**Katrin Hecht**  
Biocatalysis – recent advances and future challenges

**Alessandro Presentato**  
Title to be announced

**Gottfried Dasen**  
«How dead is dead» – Killing of bacteria

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

**12:30**            **Lunch**

**14:30 16:30**    **Drug Delivery and Nanotechnology**  
                    **Chair: Raffaella Boggia**

**Francesca D'Anna**  
Organic Salts: Playing the Game of the Structure to Tune  
the Applications

**Otto Maike**  
Development of therapeutic nanobody-polymer-  
conjugate targeting B7H3

**Giulio Gherzi**  
Nanoparticles in Biomedicine: a world to discover

**17:00**            **Concluding remarks**

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**September 3 - 6, 2023**  
**Orto Botanico, Aula Maggio Dpt. STEBICEF**  
**Palermo, Italy**

<b>XVII Summer School on Advanced Biotechnology</b> <b>3-6 September 2023 Palermo, Italy</b> <b>Preliminary Program</b>						
		Monday 4		Tuesday 5		Wednesday 6
8:30		Registration				
9:00		Welcome and Opening remarks				
9:30	Chair: Laura Suter-Dick Section: Medical Biotechnology	Jack Rohrer How do we get drugs into the brain ?	Chair: Harald Shobel Section: Microbial Biotechnology	Aline Adler Title to be announced	Chair: Giulio Gherzi Section: Microbial Biotechnology	Arash Sadeghi-Mehr A plant-base alternative to yogurt: Effect of fermentation on pea protein
9:50		Andrea Bieder Organoid-Based in vitro pharmacological assays		Elena Piacenza Application of biogenic nanomaterials: a biotechnological perspective		Andreas Walter Microbial solutions to address plastic pollution
10:10		Eric Kubler Title to be announced		Nicolas Huguenin-Dezot Biosintesis ad genetic encoding of phosphatase in E. Coli		Laurent Coutillon Title to be announced
10:30		Coffee break		Coffee break		Coffee break
11:20	Chair: Jack Rohrer Section: Medical Biotechnology	Laura Suter-Dick Title to be announced	Chair: Christoph Griesbeck Section: Microbial Biotechnology	Sven Panke Title to be announced	Chair: Thomas Villiger Section: Biotechnology Applications	Katrin Hecht Biocatalysis – recent advances and future challenges
11:40		Laura Lentini Targeting Nonsense: Rescue of CFTR Expression and Functionality in Cystic Fibrosis Cell Model Systems by TRIDs		Juan Limon Petersen Estimation of biomass in microalgae cultivation via impedance spectroscopy		Alessandro Presentato Title to be announced
12:00		Thomas Villiger Continuous Bioprocessing: From antibodies to viral		Simon Crelier Anaerobic digestion of organic waste for biogas production		Gottfried Dasen «How dead is dead» – Killing of bacteria
12:20		Valeri Vetri Peptide-membrane interactions		Harald Shobel Shed light on photosynthetic organisms: Light as a tool in biotechnology		Lucia Colleselli Blink-bling by MOs: Biological Synthesis of nanoscaled metallic particles
12:40		Lunch		Lunch		Lunch
15:00	Chair: Simon Crelier Section: Industrial and Environmental Biotechnology	Christoph Griesbeck Title to be announced	Chair: Elena Piacenza Section: Biotechnology Applications	Luciana Migliore Title to be announced	Chair: Raffaella Boggia Section: Drug Delivery and Nanotechnology	Francesca D'Anna Organic Salts: Playing the Game of the Structure to Tune the Applications
15:20		Wolfgang Merkle Optimization of ex-situ biomethanation and evaluation of medium components		Raffaella Boggia Valorization of fishery unsorted side stream: a case study		Otto Maiké Development of therapeutic nanobody-polymer-conjugate targeting B7H3
15:40		Giorgio Mannina Advances in water resource recovery from wastewater treatment: roadmapping the transition to circular economy		Alexandre Kuhn Improved molecular diagnostic based on long read DNA sequencing		Giulio Gherzi Nanoparticles in Biomedicine: a world to discover
16:00						
16:20						
17:00		Welcome Party		Free evening		Concluding remarks