AlgaeNet4AV SUMMER SCHOOL

Advances in Microalgae Research: Biodiversity, Biotechnology, and Bioinnovation

Online
29-30 June 2026

Registration link: Summer School REGISTRATION

This project has received funding from the European Union's Horizon 2021 research and innovation programme under the Marie Skłodowska-Curie grant agreement No 101086437

FUNDING PROGRAM AND ACTIVITY:

AlgaeNet4AV is a Project funded by the Program HORIZON-MSCA-2021-SE-01 - Project ID 101086437
PI, Panagiotis Madesis, Institute of Applied Biosciences, Centre for Research & Technology, Hellas

ORGANIZERS:

Nico Salmaso, Leonardo Cerasino, Fondazione Edmund Mach, San Michele all'Adige, Italy

THE ALGAENET4AV PROJECT

Eukaryotic microalgae and cyanobacteria represent one of the most diverse biological resources, adapted to a wide range of environments. This diversity offers vast potential for discovering novel and unexplored metabolites with relevance for biotechnology research and exploitation. Yet, microalgal compounds remain largely unexploited, mostly due to limited research. The AlgaeNet4AV project aims to study eukaryotic microalgae and cyanobacteria biodiversity to develop bio-based products with applications in pandemic-related challenges. By verifying microbiological resources, the project looks for developing complementary tools at different scales, from basic research to industrial production. For a complete overview, see http://algaenet4av.eu/

THE ALGAENET4AV SUMMER SCHOOL

The Summer School *Advances in Microalgae Research: Biodiversity, Biotechnology, and Bioinnovation*, is organised within the framework of the Training and Dissemination activities of the AlgaeNet4AV project, focusing on the topic of *Microalgae Ecology and Biodiversity*. The school will provide insights into assessing the main steps involved in developing and exploiting novel and unexplored metabolites synthesised by eukaryotic microalgae and cyanobacteria. Experts from academia and industry will cover the main relevant complementary fields, from the study of taxonomic and metabolomic biodiversity to large-scale biomass production. Speakers will explain the interconnected development process, from research and laboratory phases to planning, testing, and production.
The program is available for download at the following link: **Summer School PROGRAM**

REGISTRATION

The Summer School will be delivered fully online, with the possibility to attend lectures onsite at Fondazione Edmund Mach, Istituto Agrario di San Michele all'Adige.
Participation is free of charge, and prospective participants are invited to register using the following link:

Summer School REGISTRATION

Only registered participants will receive instructions for the event and a Certificate of Attendance upon completion of the course.

ONSITE INFORMATION AND CONTACTS

Fondazione Edmund Mach
Via E. Mach, 1 38098 - S. Michele all'Adige (Trento), Italy –
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SPEAKERS AND PARTICIPATING INSTITUTIONS / COMPANIES

Nikolaos Labrou Dionisia Sazali	**Agricultural University of Athens** – Athens, Greece
Helena Cardoso	**Allmicroalgae** – Pataias, Portugal
Emilio Baixauli Marián Merino José Luis Mullor	**Bionos Biotech** – Valencia, Spain
Artemis Athanasiou Sofoklis Keisaris Panagiotis Madesis	**CERTH** – Thessaloniki, Greece
Emil Gundersen	**DTU National Food Institute** – Lyngby, Denmark
Leonardo Cerasino Massimo Pindo Nico Salmaso	**FEM** – San Michele all'Adige, Italy
Alexandre Rodrigues	**NECTON** – Olhao, Portugal
Luka Dobrović	**Particula Group Ltd** – Rijeka, Croatia
Zhengguang Wang Eugene Futai Tomohisa Ogawa	**Tohoku University** – Sendai, Japan

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Program

DAY 1 – Monday, 29 June, Morning

9:20-12:35 CET

Time	Topic	Title	Speaker
9:10-9:20		*Web conferencing setup and remote participant connection*	
9:20-9:30		Institutional Opening Remarks	FEM Representative
9:30-9:40		OPENING - The AlgaeNet4AV project and the Summer School initiative	Panagiotis Madesis, CERTH
9:40-9:50		Introduction, overview, and objectives of the Summer School	Nico Salmaso & Leonardo Cerasino, FEM
9:50-10:20	Advances in the molecular study of biodiversity	Innovative approaches in metagenomics	Massimo Pindo, FEM
10:20-11:20	Microalgal Taxonomy and Functional Diversity	Exploring conventional and novel strategies to characterize microalgal biodiversity and functions	Nico Salmaso, FEM
11:20-11:40		Coffee-Break	
11.40-12:25	Bioactivity and Functional Genomics	Antimicrobial proteins: Mechanisms, engineering, and therapeutic potential	Dionisia Sazali & Nikolaos Labrou, Agr. Univ. Athens
12:25-12:35	Q & A		
12:35-14:15	Lunch Break		

DAY 1 – Monday, 29 June, Afternoon

14:15-18:00

14:00-14:15		*Web conferencing setup and remote participant connection*	
14:15-15:15	Metabolomics and Metabolic Profiling	Metabolomic approaches for microalgal natural product discovery	Leonardo Cerasino, FEM
15:15-16:00	Bioactivity and Functional Genomics	Transcriptomic analysis of microalgae as a tool for their biotechnology applications	Sofoklis Keisaris & Panagiotis Madesis, CERTH
16:00-16:20		Coffee-Break	
16:20-17:05	Bioactivity and Functional Genomics	Enhanced production of value-added metabolites under stress conditions	Artemis Athanasiou & Panagiotis Madesis CERTH
17:05-17:50	Recovery of High-Value Microalgal Compounds	From cultivation to extraction: Optimizing microalgal production and recovery of lipids and bioactives	Emil Gundersen, DTU National Food Institute
17:50-18:00	Q & A		

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DAY 2 – Tuesday, 30 June, Morning

9:15-12:45 CET

Time	Topic	Title	Speaker
9:00-9:15		*Web conferencing setup and remote participant connection*	
9:15-9:35	Bioactivity	Cyanobacteria Lectin MVL interacts with SARS-CoV-2 RBD via carbohydrate recognition and Protein–Protein Interaction	Zhengguang Wang, Eugene Futai & Tomohisa Ogawa, Tohoku University
9:35-10:20	Bioactive Compound Testing – Efficacy and Toxicity	Microbiome and related approaches	Emilio Baixauli, Bionos Biotech
10:20-11:05	Bioactive Compound Testing – Efficacy and Toxicity	In vitro studies	Marián Merino, Bionos Biotech
11:05-11:25		Coffee-Break	
11:25-12:10	Bioactive Compound Testing – Efficacy and Toxicity	In vivo studies	José Luis Mullor, Bionos Biotech
12:10-12:40	In silico Bioactive compound discovery	Genome mining in biotechnologically relevant cyanobacteria	Nico Salmaso, FEM
12:40-12:50	Q & A		
12:50-14:15	Lunch Break		

DAY 2 – Tuesday, 30 June, Afternoon

14:15-17:15

14:00-14:15		*Web conferencing setup and remote participant connection*	
14:15-15:00	Scale-up and Industrial Cultivation	Industrial microalgae production: Current challenges and future prospects	Alexandre Rodrigues, NECTON
15:00-15:45	Scale-up and Industrial Cultivation	Debunking microalgae myths: Overcoming barriers to commercial success	Helena Cardoso, Allmicroalgae
15:45-16:05	Coffee-break		
16:05-16:50	Socioeconomic and Life Cycle Assessment	Socioeconomic analysis and life cycle assessment	Luka Dobrović, Particula
16:50-17:00	Q&A		
17:00-17:10		Closing remarks	Panagiotis Madesis, CERTH
17:10-17:15		Instructions for certificates of attendance	

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