



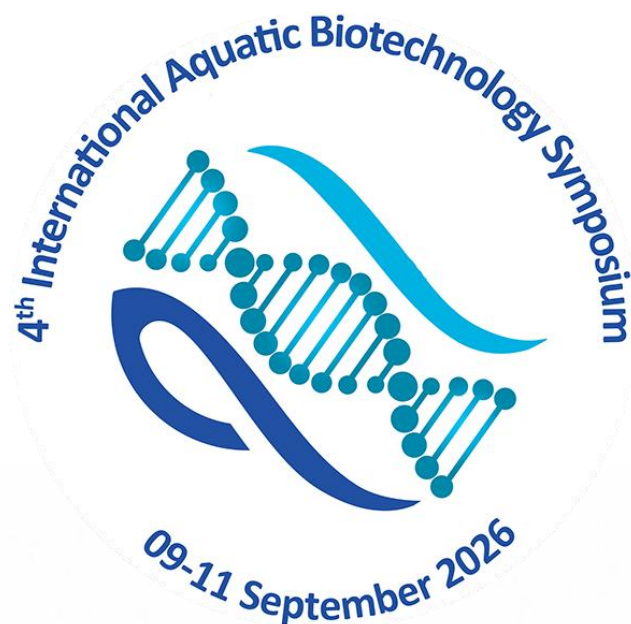
4<sup>th</sup> International  
Aquatic Biotechnology Symposium

# AQUABIOTECH 2026

## 4<sup>th</sup> INTERNATIONAL AQUATIC BIOTECHNOLOGY SYMPOSIUM

Naples, Italy | September 9-11, 2026

AULA MAGNA – Centro Congressi Federico II, Via Partenope, 36



## Scientific committee

**Reyhan Akçaalan** – Istanbul University, Türkiye

**Meriç Albay** – Istanbul University, Türkiye

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**Anna De Marco** – Dept. of Pharmacy, University of Naples Federico II, Italy

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**Elisabeth Janssen** – Swiss Federal Institute of Aquatic Science and Technology (Eawag), Switzerland

**Dean Jerry** – Tropical Futures Institute, James Cook University, Singapore ARC Research Hub for Supercharging Tropical Aquaculture through Genetic Solutions, James Cook University, Australia

**Triantafyllos (Tri) Kaloudis** – The Athens Water Supply and Sewerage Company (EYDAP S.A.) & NCSR Demokritos, Greece

**Antonella Leone** – National Research Council, Institute of Sciences of Food Production (CNR-ISPA), Italy

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**Giovanna Romano** – Dept. of Ecosustainable Marine Biotechnology, Stazione Zoologica Anton Dohrn Naples, Italy

**Luciana Tartaglione** – Dept. of Pharmacy, University of Naples Federico II, Italy

## Organizing committee

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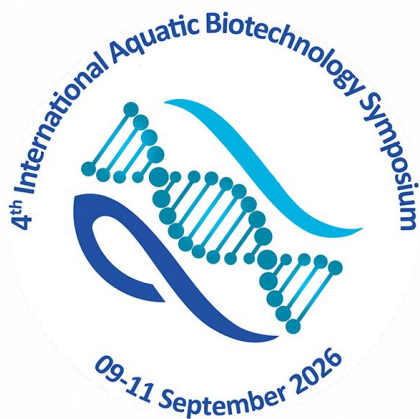
**Luciana Tartaglione** – Dept. of Pharmacy, University of Naples Federico II, Italy

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**Claudia Caiazzo** – Dept. of Pharmacy, University of Naples Federico II, Italy

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# DAY 1 • Wednesday, September 9, 2026

**08:00** Registration & Welcome

**09:00** Opening Ceremony  
Greetings from the director of the Dept. of Pharmacy (UniNA) Prof. Angelo Antonio Izzo and the former Italian Minister of the Environment Sergio Costa

**10:00** Plenary Lecture 01| Luisa Valente – From waste to feed: Biotechnology and the circular bioeconomy in aquaculture

**10:45** COFFEE BREAK

## SESSION 1

### Biotechnology of Aquatic Sustainable Aquaculture

Chairs: C. Messina (Italy) and L. Botana (Spain)

**11:13** O-01 C. Messina - *Blue skills, living labs and stakeholder engagement for a sustainable blue transformation*

**11:26** O-02 M. G. Antoniou - *Turning toxic cyanobacterial biomass into energy and biofertilizers: The CYANOTECH approach*

**11:39** O-03 D. Jerry - *Born male, destined female: The biology and biotechnology of sex change in barramundi (*Lates calcarifer*)*

**11:52** O-04 F. Abdi - *Evaluation and valorization of shrimp shell waste for astaxanthin recovery: Effect of drying and extraction methods*

**12:05** O-05 C. Piccini - *Microbiome role in restoration and conservation in the freshwater mussel *Unio elongatulus**

**12:18** O-06 I. Buttino - *Marine copepods and associated microbiome for sustainable aquaculture and biotechnological innovation*

**12:31** O-07 M. Dormousoglou - *Evaluating novel plant extracts as promising phytobiotics for aquaculture*

**12:44** O-08 E. Della Ceca - *From waste to value: Eco-friendly astaxanthin extraction from blue crab shell*

**12:57** LUNCH BREAK

## SESSION 2

### Bioprospecting Aquatic Organisms for Novel Metabolites

Chairs: L. Pezzolesi (Italy) and T. Kaloudis (Greece)

**14:00** O-09 E. Altinkaya - *Conversion of waste seagrass into carbon dots: Synthesis and characterization*

**14:13** O-10 S. Federico - *Extraction and potential biotechnological applications of sulphated polysaccharides derived from four Mediterranean marine sponge species*

# DAY 1 • Wednesday, September 9, 2026

## SESSION 2

### Bioprospecting Aquatic Organisms for Novel Metabolites (Continued)

- 14:26** O-11 F. Palma Esposito - *New brominated alterochromides from coral-associated Pseudoalteromonas*
- 14:39** O-12 R. Giaccari - *The omega-3 biosynthetic pathway in the Antarctic diatom Fragilariopsis cylindrus*
- 14:52** O-13 R. Konkel - *From the sea to cancer therapy: Discovery of a new family of chlorinated metabolites*
- 15:05** O-14 R. Li - *Preparation and bioactivities of polysaccharides and peptides from Sea cucumber*
- 15:18** O-15 C. Louati - *Valorization of Daphnia magna and microalgae for high-value biomolecules production*
- 15:31** O-16 A. Oguz - *Assessment of the biodiesel potential of microalgal blooms: Lipid and fame yields from freshwater ecosystems in Türkiye*
- 15:44** O-17 M. Simonazzi - *Carbon nanomaterials meet algae: Boosting photosynthesis and valuable products*
- 15:57** Freetime before the cultural visit to the Madre Museum
- 17:30** CULTURAL AND SOCIAL EVENT: Ice breaker & Music

## DAY 2 • Thursday, September 10, 2026

**09:00** Plenary Lecture 02|Claire Hellio – Marine biotechnology for a sustainable future: marine organisms bioprospecting and the development of eco-friendly products

### SESSION 3

#### Bioremediation, Biomonitoring and Biosensing in Aquatic Environments

Chairs: A. De Marco (Italy) and J. Diogène (Spain)

- 09:45** O-18 A. Gangwar - *Development of a continuous two-stage system for the remediation of offshore produced water*
- 09:58** O-19 B. Kaya - *Aerobic granular sludge technology for sustainable treatment of high-strength mixed industrial wastewater*
- 10:11** O-20 D. M. Monti - *Microalgae as a biotechnological tool for bio-CCU*
- 10:24** O-21 M. Piscopo - *The impact of microplastics on the properties of protamine-like proteins. A case of gamete plasticity or a risk to reproduction in *Mytilus galloprovincialis*?*
- 10:37** O-22 A. Postiglione - *Biomonitoring of metal(loid) pollution in freshwater ecosystems: An Integrated study of bioaccumulation, oxidative stress, and detoxification mechanisms in *Leptodictyum riparium**
- 10:50** O-23 S. Spatharis - *Towards a data-driven biofouling forecast system for the seaweed biotechnology sector*

**11:03** COFFEE BREAK

### SESSION 4

#### Bioremediation, Biomonitoring and Biosensing in Aquatic Environments

Chairs: A. Leone (Italy) and D. Jerry (Australia)

- 11:30** O-24 N. G. Apostolopoulou - *Red microalgae *Dorphyridium purpureum* under different light colours: Uncovering growth mechanisms*
- 11:43** O-25 M. Dentato - *When bioremediation meets stress: Arsenic in moss-snail aquatic system*
- 11:56** O-26 T. Greca - *Interactive effects of cadmium and nitrogen depletion on resting spore dynamics in *Chaetoceros* spp.*
- 12:09** O-27 L. Harutyunyan - *The diversity of cyanophages in Lake Sevan, Armenia and their potential impact on harmful cyanobacterial blooms*
- 12:22** O-28 C. Marinaro - *Molecular effects of chromium on the sperm chromatin of *Mytilus galloprovincialis**
- 12:35** O-29 I. Ostrovsky - *Acoustic and satellite techniques for quantification and monitoring of gas-bearing cyanobacteria*

## DAY 2 • Thursday, September 10, 2026

### SESSION 4

#### Bioremediation, Biomonitoring and Biosensing in Aquatic Environments (Continued)

**12:50** O-30 F.A. Ozdemir Olgun - *Adsorptive removal of amoxicillin by Ulva lactuca from aqueous medium*

**13:03** LUNCH BREAK

### SESSION 5

#### Omics in Aquatic Biotechnology

Chairs: L. Tartaglione (Italy) and M. Albay (Türkiye)

**14:00** Keynote Lecture 01| M. Fabris - *Domestication of algal bio-factories: metabolic mapping and engineering of diatoms*

**14:15** O-31 I. Bilgin - *Metagenomic analysis of bacterial pathogens associated with microplastics in the coastal marine environments of Izmir and Istanbul*

**14:28** O-32 M.E. Collaro - *Mass spectrometry query language (MassQL)-assisted detection of microcystin variants*

**14:41** O-33 D. Giordano - *Antarctic UV-resistant marine bacteria: An untapped carotenoid source*

**14:54** O-34 G. Ozbayram - *Bacterial diversity and biotechnological prospects of Antarctic epibenthic biofilms from Horseshoe Island*

**15:07** O-35 N. Salmaso - *Genome-resolved taxonomic and functional characterisation of the genus Limnospira*

**15:20** O-36 E. Asimakis - *Isolation and phylogenomic characterization of Aeromonas veronii strains associated with outbreaks in commercial Mediterranean aquaculture facilities*

**15:33** COFFEE BREAK

**16:00** A. Marrano - ERC Workshop

**17:00** POSTER SESSION 1

**20:30** Social Dinner Experience at A'MBASCIATA Palazzo Venezia

## DAY 3 • Friday, September 11, 2026

**09:00** Plenary Lecture 03| Spyros Gkelis - *Metabologenomics: Bridging habitat adaptation and biodiscovery in photosynthetic microorganisms*

### SESSION 6

#### Photosynthetic Microorganism Biotechnology

Chairs: R. Akçaalan (Türkiye) and N. Salmaso (Italy)

**09:45** Keynote Lecture 02| G.L. Rorrer - Controlled extrusion of N-acetyl glucosamine nanofibers by diatom microalgae

**10:00** O-37 L. M. Botana - Recent findings to update and understand the mode of action of diarrhetic and ciguatera toxins

**10:13** O-38 S. Carfagna - *Galdieria phlegrea* physiology drives biotechnologically relevant metabolites

**10:26** O-39 L. Cerasino - Tracking Lake Garda's cyanotoxins: Trend analysis over a fifteen years of monitoring

**10:39** O-40 J. Diogène Fadini - Biotechnology and ecology of harmful marine microalgae involved in Ciguatera, an indispensable partnership

**10:52** O-41 E. Vitale- Ecological variables modulate bioactive compounds in Mediterranean algal community

**11:05** COFFEE BREAK

### SESSION 7

#### Aquatic Biotechnologies in European and International Projects: The Experience of BIOBASED Project

Chairs: G. Romano (Italy) and H. D. Laughinghouse IV (USA)

**11:30** O-42 M. Stulgis- EU Support for algae sector: So far and what's next

**11:45** O-43 S. Fatica - Welcome note and Presentation of the Interreg VI-A Italy - Croatia programme 2021/2027

**11:55** O-44 M. Francavilla - Advancing blue biorefinery development in the Adriatic Sea (BIOBASED Project)

**12:10** O-45 A. Miccoli - Regulatory framework and market analysis for macroalgae-based value chains in the Adriatic: A cross-border action plan

**12:20** O-46 E. Dobroslavic - Seasonal cultivation of *Ulva* spp. in an IMTA system in Mali Ston Bay

**12:30** O-47 E. Rambaldi - The strategic role of shellfish farmers in ecological transition and IMTA systems

**12:45** POSTER SESSION 2

**13:30** LUNCH BREAK

## DAY 3 • Friday, September 11, 2026

### SESSION 8

#### **Aquatic Bioresources and Biotechnology: From Photosynthetic Microbes to Aquatic Fauna for Sustainable Aquaculture**

Chairs: A. Hiskia (Greece) and P. Napoletano (Italy)

- 14:30** O-48 C. Buonocore - *From invasive biomass to bioactive peptides: Pufferfish collagen hydrolyzates*
- 14:43** O-49 C. Spetea Wiklund - *Screening North Sea and mediterranean microalgae for salmon RAS water valorisation*
- 14:56** O-50 M. Cariglia - *Redesigning the blue economy: Regenerative integrated aquaculture and regional food heritage toward a replicable model of resilience*
- 15:09** O-51 H. D. Laughinghouse IV - *Benthic Cyanobacterial mats on Curaçao reefs: Abundance, nitrogen fixation, and toxicity on changing reefs*
- 15:22** O-52 F. Guidi - *ATL.A.HUB: Accelerating marine algae biotechnology in the Atlantic Area*
- 15:35** COFFEE BREAK
- 16:05** O-53 E. Maresca - *Valorization of fish processing by-products through collagen extraction for biomedical and high-value application*
- 16:18** O-54 L. Marra - *Exhausted culture media reuse in autotrophic microalgae production: optimization and modelling of Pseudococcomyxa simplex cultures*
- 16:31** O-55 K. Veliz - *Effect of spore encapsulation on the development of the microscopic phase of the South Pacific kelp Lessonia berteroana*
- 16:44** O-56 S. Vergetzi - *Characterization of photosynthetic microorganisms associated with Mentha spp. plants*
- 16:57** O-57 V. Villanova - *Functional screening of halophilic microorganisms in retentate wastewater*
- 17:10** Awards and Closing Ceremony

# Poster List

## POSTER SESSION 1

- P-01 R. Akcaalan - *Linking lipid accumulation to microbial community dynamics in Botryococcus sudeticus under nitrogen stress*
- P-02 M. Albay - *Cross-domain microbial insights into ecosystem resilience and restoration potential in a hypereutrophic coastal lagoon*
- P-03 A. Alfonso - *Pharmacological potential of compounds isolated from Dictyota spp. Seaweeds*
- P-04 A. Bagnato - *Production and characterization of marine-based 3D scaffolds: A comparative study of bioreactor and static culture systems*
- P-05 D. Blagojević - *The impact of red and green light on the growth and phycobiliproteins in Nostoc strains*
- P-06 G. Borsetta - *From invasive species to economic resource: Valorization and market perspectives of the atlantic blue crab (Callinectes sapidus)*
- P-07 C. Caneira - *Microfluidic PLP-RCA detection of the microcystin biosynthesis gene mcyE*
- P-08 I. Can-Tunçelli - *Emerging contaminants in seafood safety: A one health perspective from biomonitoring to consumer risk assessment*
- P-09 I. Can-Tunçelli - *Marine bioindicator species as sentinels of microplastic contamination: An integrated framework for aquatic food supply safety*
- P-10 V. Ceccherini - *Genomic and metabolic profiling of Microcystis aeruginosa blooms in lake Serraia*
- P-11 B. Çelik - *Marine ecosystem assessment of a student-designed offshore wind farm in the aegean sea: The Bozcaada YEKA Cas*
- P-12 A. Coppola - *Bioactivity antiproliferative screening of Antarctic cold-adapted bacteria*
- P-13 H. D. Laughinghouse IV - *From genes to molecules: Connecting biosynthetic gene clusters and specialized metabolism in the Cyanobacterial genus Floridanema*
- P-14 H. D. Laughinghouse IV - *BCCM/ULC: A public culture collection for ex situ conservation of cyanobacterial diversity and support of biotechnological applications*
- P-15 A. De Felice - *Biosynthetic potential and carotenoids in an Antarctic marine Arthrobacter strain*
- P-16 V. Ghionna - *Occurrence of saxitoxins in marine invertebrates from Apulian lagoons*
- P-17 N. T. Papadopoulos - *Isolation and characterization of cyanobacteria from diverse habitats in Naples*

# Poster List

## POSTER SESSION 1

(Continued)

- P-18 G. Kopp - *Identifying chemical epigenetic modifiers concentration for diatom cultures*
- P-19 I. Hmani - *From regenerative IMTA biomass to blue biorefinery products: Cascade valorisation of Gracilaria and Ulva in the Adriatic*
- P-20 Z. Zengin - *Species level characterisation of Cyanobacterial blooms by nanopore sequencing approach*
- P-21 D. Özyurt - *Green synthesis of CeO<sub>2</sub>-x nanoparticles for oxidative removal of geosmin and 2-MIB*
- P-22 A. Leone - *Purple bacteria as novel foods and feeds: Antioxidant and cytotoxic properties*

## POSTER SESSION 2

- P-23 D. Memiş - *Bioproduct potential of aquacultured sturgeons*
- P-24 A. Inam - *Phenolic, flavonoid and antibacterial properties of green microalgae and diatoms*
- P-25 N. T. Popović - *Fish-based models for multilevel assessment of aquatic environmental stressors*
- P-26 N. T. Popović - *Novel invasive tunicate species affecting mussels in the northern Adriatic Sea*
- P-27 J. Simeunović - *Exploring the biosynthetic potential of Nostoc 2S3B strain by genome mining*
- P-28 G. Tunçelli - *Microplastic exposure and swimming performance in aquaculture species: Implications for fish welfare, growth, and production efficiency*
- P-29 V. Vedi - *Interaction of microalgae with microplastics: Reciprocal toxicity and biodegradation*
- P-30 C. Lauritano - *Antiproliferative activity from Antarctic phytoplankton*
- P-31 V. M. Vivenzio - *Characterization and chitosan immobilization of a marine carbonic anhydrase for CO<sub>2</sub> enrichment in microalgal cultures*
- P-32 A. Yildirim - *Biotechnological valorisation of biomass from recombinant xylanase-secreting Chlamydomonas reinhardtii*

# Poster List

## POSTER SESSION 2

(Continued)

- P-33 R. Ofano - *AQUASERV: Research services for sustainable aquaculture, fisheries and blue economy*
- P-34 T. Poletti - *Development of a floating monitoring device for water quality assessment in the Piracicaba River, Brazil*
- P-35 L. Pezzolesi - *Re-thinking the role of the microalgal-bacterial association in polyhydroxybutyrate (PHB) accumulating cultures of *Desmodesmus communis**
- P-36 A. Pica - *Assessing the impact of marine protected areas on microbiome dynamics along the Sardinian coast*
- P-37 C. Flores- *Powerful of mass spectrometry approaches for analysis of toxins*
- P-38 K. I. B. Çetin- *Sustainable cherry waste-derived biochars for methylene blue removal: A promising approach for wastewater treatment*
- P-39 G. Romano- *Microalgal biomass valorisation for sustainable production of functional food and feed ingredients*
- P-40 B. Bessadok - *Bioprospecting Tunisian aquatic yeasts for blue biotechnology applications*
- P-41 C. Messina - *Blue biotechnology: From aquaculture side streams to cellular agriculture*
- P-42 C. Messina - *Valorizing aquaculture halophyte biomass: A green biorefinery perspective*
- P-43 L. Köker - *Nitrogen and phosphorus removal potential of the aquatic plant *Egeria densa**
- P-44 C. Carbonara - *Chamelea gallina as a sentinel species for microplastic biomonitoring along the Adriatic Apulian coast*
- P-45 S. Rosati - *Alginate as a marine biopolymer for bioactive edible coatings*
- P-46 S. Rosati - *Microbiological quality of sea bass and sea bream from an IMTA system*
- P-47 F.Z. Guellati - *Emergence of *Cylindrospermopsis raciborskii* as the dominant cyanobacterium in lake Oubeira: Insights from community shifts and toxin dynamics*
- P-48 A. Montalbano - *Proteomic Analysis and biochemical characterization of the nematocyst extract from *Pelagia noctiluca* (Forsskål, 1775)*

## UNDER THE AUSPICES



UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II



Consiglio Nazionale delle Ricerche



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

DEPARTMENT  
OF BIOLOGICAL, GEOLOGICAL,  
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