



4th International Aquatic Biotechnology Symposium

AQUABIOTECH 2026

4th INTERNATIONAL AQUATIC BIOTECHNOLOGY SYMPOSIUM

Naples, Italy | September 9-11, 2026

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



Scientific committee

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Meriç Albay – Istanbul University, Türkiye

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

Jorge Diogène – Institute of Agrifood Research and Technology (IRTA), Spain

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Anastasia Hiskia – National Centre of Scientific Research (NCSR) Demokritos, Greece

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

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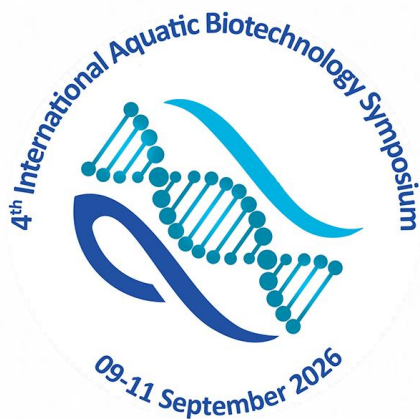
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Scientific Organization: info@aquabiotech2026.it



DAY 1 • Wednesday, September 9, 2026

08:00 Registration & Welcome

Opening Ceremony

09:00

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| Luìsa 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 P. Stathopoulou – *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*
- 14:42** 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 - *Valorisation 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 DataDriven 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 *Porphyridium 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 G. Tsiamis – *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. Salmasso (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 diarrheic and ciguatera toxins*

10:13 O-38 S. Carfagna - *Galdieria phlegrea Physiology Drives Biotechnologically Relevant Metabolite*

10:26 O-39 L. Cerasino - *Tracking Lake Garda's cyanotoxins: trend analysis over a fifteen years - 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 Waste Water*
- 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 CeO₂-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 CO₂ 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 F.Z. Guellati – *Emergence of *Cylindrospermopsis raciborskii* as the Dominant Cyanobacterium in Lake Oubeira: Insights from Community Shifts and Toxin Dynamics*

UNDER THE AUSPICES



UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II



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