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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Louis Botana – University of Santiago de Compostela (USC), Campus de Lugo, Spain

Mònica Campàs – Institute of Agrifood Research and Technology (IRTA), Spain

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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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Scientific Organization: info@aquabiotech2026.it

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| 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

Photosyntetic 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 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 CeO_2-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 Phytoplancton*

P-31 V. M. Vivenzio – *Characterization and chitosan immobilization of a marine carbonic anhydrase for CO_2 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*

UNDER THE AUSPICES

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