

Algae-based innovation for next level combined aquaculture production

Online TEAMS event, Wednesday, February 11th, 08.30 - 11.30 (CET)

Through its involvement in the EU Horizon Europe INNOAQUA project, and in partnership with the Microalgae-Biota Technology and Innovation Research (ALBIC), Universiti Putra Malaysia, Institute of Climate Adaptation and Marine Biotechnology (ICAMB), Universiti Malaysia Terengganu (UMT), the European Aquaculture Society (EAS) is pleased to present this event on combined plant and animal aquaculture production technologies.

This short, focussed event will showcase examples of production systems at pilot or near full scale production from Europe and SE Asia and will be followed by a panel discussion and audience Q&A that will discuss concept approaches, pilot successes and upscaling issues. Its principal objective is to share experience with experts on systems, methods, species, approaches and target end-products – paving the way for future cooperation and partnership. It is the first of two events – the second focusing more on algal extracts and their potential applications.

Introduction



By the moderators: **Dorinde Kleingris** (NORCE, Norway) and **Natrah Ikhsan** (Albic Group, Universiti Putra Malaysia Malaysia)

Case study presentation



Montakan Tamtin (Coastal Aquaculture Research and Development Division, Department of Fisheries, Thailand). "Overview of seaweed cultivation and production in Thailand".

Rui Perreira (A4F, Portugal). "INNOAQUA land-based IMTA pilot in Portugal, with sole & macroalgae".

Nguyen Nhut (Research Institute for Aquaculture No. 2 (RIA2), Vietnam). "Developing Intensive White Shrimp (*Litopenaeus vannamei*) Culture through IMTA-RAS Technology for Climate Change Adaptation and a Circular Economy Approach".

Pia Steinrücken (NORCE, Norway). "INNOAQUA: Land based IMTA – integrating salmon and microalgae cultivation at pilot scale".

Wahidatul Husna (Borneo Marine Research Institute, Universiti Malaysia Sabah, Malaysia). "Integrating High-Value Sea Urchins and Tropical Seaweeds into Traditional Finfish Farming through Sea-based IMTA in Malaysia".

Pauline O'Donohoe (Marine Institute, Ireland). "ASTRAL - IMTA Species of the Future."

Panel



Panel discussion and open Q&A that will discuss concept approaches, pilot successes and upscaling issues. **Panel moderator: Patrick Sorgeloos** (UGent, Belgium).

Closing comments



From the moderators.



Algae-based innovation for next level combined aquaculture production

Our moderators



Dorinde Kleinegris



Dorinde Kleinegris is Principal Investigator Microalgae at NORCE in Norway and holds a part-time position as associate professor in Marine Biotechnology at the University of Bergen. She has a background in bioprocess engineering from Wageningen University. The research of Dr. Kleinegris focusses on microalgae strain selection and improvement, cultivation and process design, as well as techno-economic and life cycle assessment studies of the microalgae production chain. Next to scientific participation and supervision in projects, she has strong background in project management, both of EU and national projects as well as bilateral projects with industry.

Natrah Ikhsan



Natrah Ikhsan is a Professor and Head of the Department of Aquaculture, Faculty of Agriculture, Universiti Putra Malaysia (UPM). She also heads the Microalgae-Biota Technology and Innovation Group (ALBIC) in the university. She specializes in Aquatic Microbial Ecology, focusing on sustainable microbial management strategies through host-microbe interaction to improve fish health. Her research includes quorum sensing socio-microbiology, exploring both pathogenic and probiotic roles particularly in algae-bacteria interactions. Dr. Natrah currently leads projects funded by the International Development Research Centre (Canada), Global Affairs Canada, and the UK's Department of Health and Social Care (GAMRIF), focusing on the development of disease control strategies using microalgae and macroalgae for aquaculture industries and coastal communities.



Patrick Sorgeloos



Patrick Sorgeloos has a PhD in marine biology and set up the Artemia Reference Center at Ghent University in Belgium in 1978. He has been involved in brine shrimp Artemia projects and fish/shellfish hatchery developments in Europe, Africa, the Americas and Asia. Until his retirement as emeritus professor in 2013 over 350 Master (from > 50 countries) and 70 PhD alumni (from > 20 countries) graduated at Ghent University in the field of aquaculture. As Past-President of the World Aquaculture Society, and co-founder and board member of the European Aquaculture Technology & Innovation Platform, Patrick is a strong promoter of international networking in aquaculture and is still involved with many international aquaculture organizations. He was co-founder of the Ghent University spin-off company Artemia Systems that is now operating under the name of INVE Aquaculture. He received honorary awards in Belgium, China, Egypt, Greece, India, Malaysia, Russia, Thailand, USA, and Vietnam.



Algae-based innovation for next level combined aquaculture production

Our speakers



Montakan Tamtin



Montakan Tamtin is the Director of the Coastal Aquaculture Research and Development Division, Department of Fisheries, Thailand, and a key national leader in sustainable coastal aquaculture policy and development. She holds an MSc in Aquaculture (Great Distinction) from Ghent University and is widely recognized for advancing seaweed aquaculture in Thailand, including the establishment of commercial seaweed farming and the national GAP standard for seaweed. She actively promotes seaweed-based livelihoods, IMTA systems, Blue Carbon initiatives, and the Bio-Circular-Green (BCG) Economy to support climate action and sustainable coastal communities.

Rui Pereira



Rui Pereira is the Director of the Centre for Innovation in Macroalgae at A4F – Algae for Future, a Portuguese company with more than 15 years of experience in the field of algae biotechnology. Academic trained as a Biologist, completed his PhD in 2004, working on the life-cycle of North Atlantic Porphyra. After a typical research career, he moved from the academic to the business world in 2012, when he co-founded ALGApplus, where he stayed until 2020. As researcher, he accumulates the experience of participation in >20 national and international projects, published a book, several book chapters and >40 scientific papers in peer reviewed journals. Current professional roles also include serving as member of the Portuguese mirror committee for standardization of algae and algae products (CT211 and CENTC454); member of the industrial committee of the European Algae Biomass Association (EABA); leading WG02 – Ulva in aquaculture - of the Cost Action Seawheat; leading WP2 of the European project INNOAQUA; serving as board member of the Kelp Ark (non-profit) organization.



Nguyen Nhut



Nguyen Nhut is a Senior Researcher at the Research Institute for Aquaculture No. 2 (RIA2), Vietnam, and a Lecturer at Can Tho and Dong Thap Universities. He holds a PhD in Aquaculture from Wageningen University, an MSc from Ghent University, and a BSc from Nha Trang University. With over 26 years of experience, he is widely recognized for advancing innovative shrimp and fish aquaculture technologies, including recirculating aquaculture systems (RAS), IMTA-RAS integration, and climate-adaptive, net-zero and circular aquaculture solutions. He has led and contributed to more than 35 R&D projects, published extensively in peer-reviewed journals and international conferences, and has received national-level scientific awards for his contributions to sustainable aquaculture development.



Algae-based innovation for next level combined aquaculture production

Our speakers



Pia Steinrücken



Pia Steinrücken is senior researcher at NORCE. Her research focuses on microalgal biotechnology and exploring the potential of microalgae for industrial applications. Her research activities include microalgal cultivation at different scales, optimizing microalgae production processes, analyzing the bacterial community compositions in microalgal cultures, and operating laboratory- and pilot-scale photobioreactors for biomass production. A strong focus of her current work is investigating the use of waste streams as a nutrient source for microalgal production and working towards making microalgal production more sustainable, cost-effective, and part of a circular bioeconomy.

Wahidatul Husna



Wahidatul Husna is a Senior Lecturer at the Borneo Marine Research Institute, Universiti Malaysia Sabah (UMS), specializing in algae biotechnology and seaweed aquaculture. She holds a PhD and MSc in Aquaculture from UMS and a BSc in Molecular Bioscience and Biotechnology from the Rochester Institute of Technology, USA. Her work focuses on micro- and macroalgae culture, community-based seaweed farming, seed production, taxonomy, post-harvest processing, and land-based culture systems. She has developed award-winning innovations in seaweed cultivation and food products, holds registered intellectual properties, and actively contributes to academic quality assurance, student development, and community engagement.



Pauline O'Donohoe



Pauline O'Donohoe has been involved with the aquaculture sector in Ireland since 1999. She holds a Senior Researcher position on the Marine Institute Aquaculture Team. Pauline has a M.Sc. in Life Science from the Atlantic Technological University - Galway and BSc (Hons) in Marine Science from the University of Galway. She is an Authorised Officer under Fisheries Acts (1959, 2006) and in this capacity manages the National Sea Lice Monitoring Programme and has facilitated the Single Bay Management across the fin-fish farming areas of the west coast of Ireland since 2000.

Pauline has been involved in national and international aquaculture research projects. She acts as the Marine Institute Compliance Officer for the Health Products Regulatory Products Authority which oversees Scientific Animal Protection in Ireland. Pauline specialises in marine open water Integrated Multi-Trophic Aquaculture (IMTA), fish health and welfare, and biosecurity of aquaculture production facilities. She also holds the role of Health and Safety Coordinator for the Marine Institute.

