AQUAPACK

Development and evaluation of the effect of novel biodegradable packaging systems on the quality and safety of perishable food and cosmetics in the supply chain of the EU region and worldwide, through the introduction of economically and environmentally sustainable packaging materials based on marine biomass (micro and macro-algae, fish processing side streams and by-catch).

Newsletter December 2025 **www.aquapack.aua.gr**

Consortium

Academic Partner

Project Coordinator Agricultural University of Athens, Greece

Centro de Ciências do Mar Portugal

Technologiko Panepistimio Kyprou (CUT, Cyprus)

Sveuciliste u Zadru (UNIZD, Croatia)

Fundacion Universidad Catolica de Valencia San Vicente Martir (UCV, Spain)

La Rochelle Universite (LRUniv, France)

Universita Degli Studi di Modena e Reggio Emilia (UNIMORE, Italy)

Commercial & Industry

Blue Island PLC (BI, Cyprus)

Georgiou Flexible Packaging AE (FLEXIA, Greece)

Korres .A. Natural Products (Korres anonimi eteria fysika proionta) (KORRES, Greece)

Marikomerc Doo (MARI, Croatia)

Necton-Companhia Portuguesa de Culturas Marinhas SA (NECTON, Portugal)

SuSea B.V. (SUSEA, Netherlands)

Associated partner

University College London (UCL, United Kingdom)

This project has received funding from the European Union's Horizon Europe Programme under the Marie Sklodowska-Curie grant agreement No 101182929.Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union. Neither the European Union nor the granting authority can be held responsible for them.

The Project

AQUAPACK engage a multi-actor approach to:

1) address the challenge of plastic reduction by introducing innovative biodegradable packaging materials derived from marine biomass, including micro- and macroalgae, fish processing side-streams and by-catch.

2) co-develop sustainable alternatives to traditional plastic packaging, enhancing both environmental responsibility and product safety in the food and cosmetics supply chains.

✓ Basic and applied research

The project encompasses basic and applied multidisciplinary research in order to:

- **Develop biodegradable packaging materials** based on aquatic biomass: microalgae, macroalgae, fish side-streams and by-catch
- **Reduce plastic pollution** by replacing conventional plastics with sustainable alternatives
- **Improve product safety and quality** through packaging with natural antimicrobial properties
- **Preserve freshness, sensory attributes and nutritional value** of perishable food and cosmetic products throughout the supply chain
- **Apply circular economy principles** by valorizing aquatic side-streams using extraction and biorefinery technologies
- **Foster international collaboration** linking academia and industry from 8 EU countries
- **Facilitate knowledge exchange and policy alignment** to support wide-scale adoption of sustainable packaging innovations
- **Contribute to EU Green Deal and Farm-to-Fork Strategy** by promoting environmentally responsible production and consumption

14 partners

4 years (2025-2029)

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Kickoff meeting, 1st of July 2025, organized by Agricultural University of Athens

The AQUAPACK project officially launched with a successful kick-off meeting on 1 July 2025, marking the start of a four-year collaboration to develop sustainable, algae- and fish-based biodegradable packaging solutions for the food and cosmetics sectors. The consortium set the course for joint activities aimed at reducing plastic pollution and promoting circular economy practices through innovative packaging materials derived from aquatic biomass and side-stream.

More information on www.aquapack.aua.gr

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TRAINING

Meet our secondees

Within the framework of the AQUAPACK project's transnational activities and the strategy for knowledge exchange between partners, two successful secondments of personnel were completed:

- **Fabio Biscarini**

Fabio Biscarini, Full Professor at UNIMORE (Italy), was hosted by Georgiou Flexible Packaging AE- FLEXIA at Athens, Greece from 19/07/2025 to 18/08/2025. During this period Prof. Fabio had the opportunity to collaborate closely with the research team, participate in ongoing experimental activities, and exchange expertise in advanced materials and characterization techniques. His visit facilitated fruitful discussions, strengthened scientific links, and contributed to the development of future joint research initiatives.

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Ioannis Marios Iliopoulos

Ioannis Marios Iliopoulos, Ph.D. Candidate from Agricultural University of Athens was hosted by Fundacion Universidad Catolica de Valencia San Vicente Martir (UCV) at Valencia, Spain from 4/11/2025 to 3/12/2025. During his stay at UCV, he received training in microalgae cultivation. Samples were collected from various locations (including lake water in Valencia and a nearby rock) and examined under the microscope to identify the presence of algae or cyanobacteria. Following microscopic observations, the samples were cultured in Petri dishes containing an appropriate growth medium to enable their further development. Overall, this training period strengthened his practical skills and enhanced his understanding of microalgae handling and cultivation techniques.

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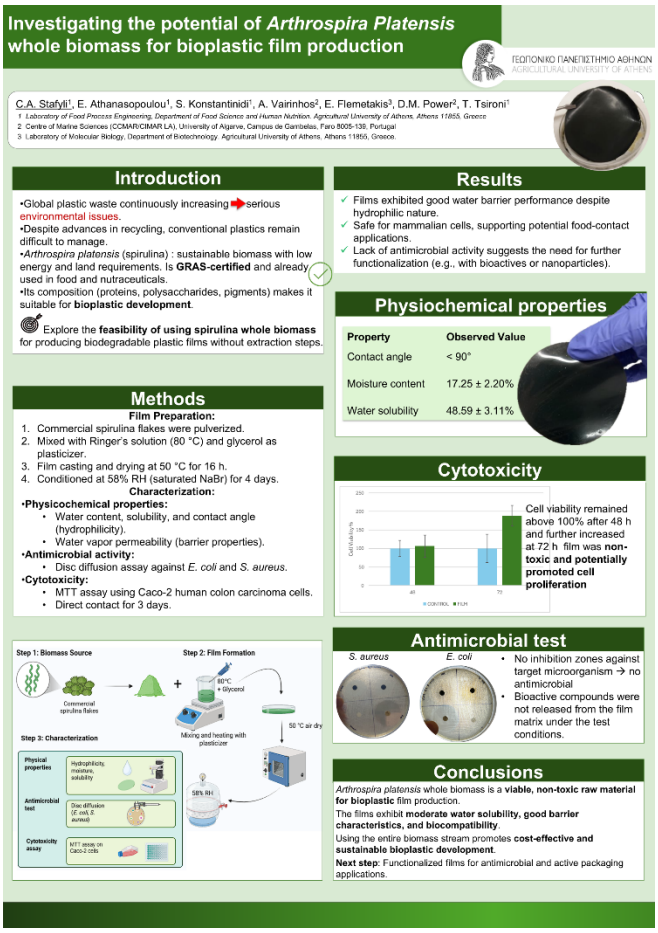
Posters Presentation

- **Stafyli C.A., Athanasopoulou E., Konstantinidi S., Vairinhos A., Flemetakis E., Power D.M., Tsironi T. Investigating the potential of Arthrospira Platensis whole biomass for bioplastic film production. 7th International Conference on Food Science & Technology, Athens, Greece, 08-09/11/2025.**



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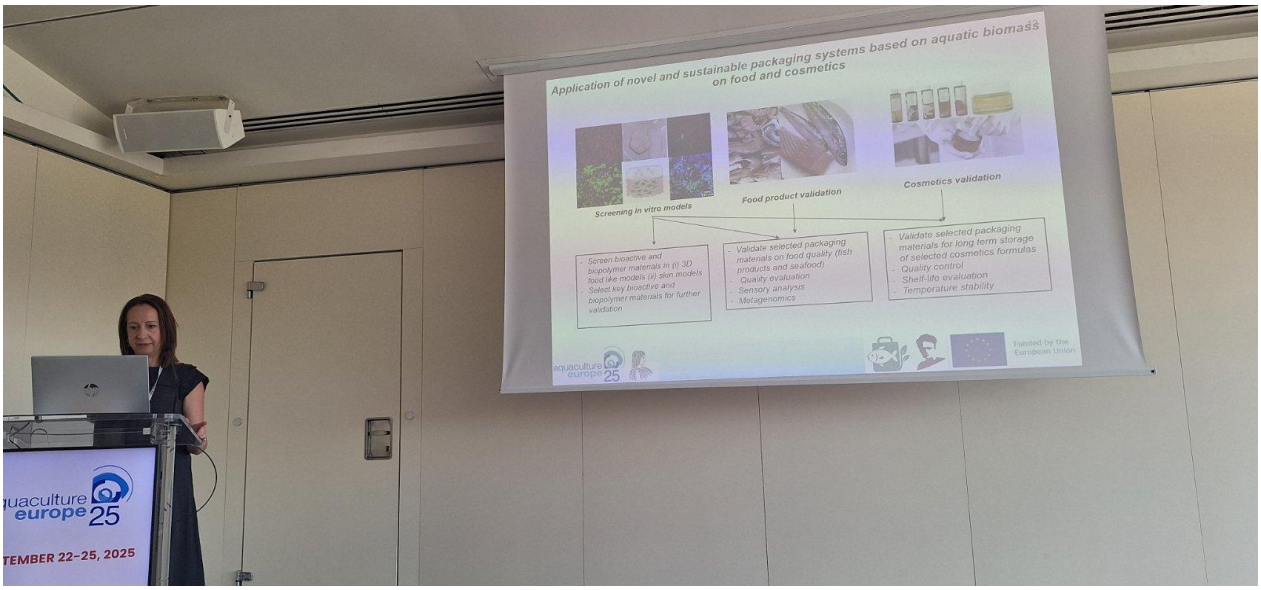
Conference Presentation

- **Tsironi T., Velliou E., Arnaudin I., Župan I., Šarić T., Koutinas M., Chirivella-Martorell J., Serrano-Aroca A., Biscarini F., Power D.M., Koutinas A., Flemetakis E. Valorisation of aquatic biomass and side-streams for sustainable packaging in the blue bioeconomy: insights from the aquapack project. Aquaculture Europe 2025, Valencia, Spain, 22-25/9/2025.**



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