



SeaWheat
COST Action CA20106

TOMORROW'S 'WHEAT OF THE SEA': ULVA, A MODEL FOR AN INNOVATIVE MARICULTURE

SeaWheat *Ulva*, Tomorrow's "Wheat of the Sea": A Model for an Innovative Mariculture

PRE-CONFERENCE EVENTS:

SEPTEMBER 12, 2022

Location: Aula Magna,

Faculty of Philosophy and Arts, University of Cádiz, Spain

12:00-14:00 Working Group and SMEs meeting*

Moderated by Prof. Muki Shpigel and Dr Rui Pereira

14:00-17:00 Working Groups and Core Group meeting*

Moderated by Prof. Muki Shpigel and Dr Thomas Wichard

17:30 COST Action Icebreaker & registration** with welcome comments from:

- Prof. Ignacio Hernández and Dr Erik-jan Malta
- Councillor Mrs. Rocío Saiz Guerrero, Executive Member, Council of City of Cádiz for Environment
- Prof. Dr María Jesús Mosquera Díaz, Vice Rector Science for Technology Policy of the University of Cádiz
- Mr Juan Manuel García de Lomas Mier, General Manager of the Andalusian Aquaculture Technology Center (CTAQUA)
- Prof. Muki Shpigel, Action Chair SEAWHEAT

Wine and refreshments will be provided

**The attendance list must be signed in person with Dr Leigh Livne*

***event is informal and participation is voluntary*

**Please use #seawheat #costaction #ulva
#algae in your social media posts**

Scientific Committee:

Chair: Dr Erik-jan Malta

Vice Chair: Dr Laurie C. Hofmann

Dr Ricardo Bermejo

Prof. Muki Shpigel

Dr Leigh Livne

Organising committee:

Dr Erik-jan Malta (CTAQUA, Spain, chair)

Prof. Dr Ignacio Hernández (Univ. Cádiz, Spain, chair)

Prof. Dr José-Lucas Pérez-Lloréns (Univ. Cádiz, Spain)

Ms. María Galindo (CTAQUA, Spain)

Ms María del Mar Agraso (Technical Director CTAQUA, Spain)

Dr María del Mar Barrios (P&O Director, CTAQUA, Spain)

Mr Manuel Macías (CTAQUA, Spain)

Dr Fini Sánchez García (Univ. Cádiz, Spain)

Dr Rui Pereira (A4F, Portugal)



08:00-09:00 REGISTRATION (Please sign the daily attendance list and GDPR each day)

09:00-09:15 Conference Opening by Dr Erik-Jan Malta, Dr Laurie Hofmann, and Prof. Ignacio Hernández

09:15-10:00 Plenary speaker: Prof. Jang K Kim

"Bad" *Ulva* vs. "Good" *Ulva*: Green Tides Versus Nutrient Bioextraction

Chair: Dr Malta

10:00-10:30 Keynote speaker: Dr Ronan Sulpice

Ulva breeding: huge potential for increased yields, but care should be taken!

Chair: Dr Malta

10:30-10:50 *Coffee Break*

Ulva Biology Session - Chair Dr Ronan Sulpice

- 10:50-11:10 Prof. Olivier De Clerck (*online*): Towards a comprehensive overview of *Ulva* species diversity in Europe
- 11:10-11:30 Dr Sotiris Orfanidis: Photosynthetic and growth strategies of *Ulva lacinulata* to survive the seasonal fluctuating conditions in a eutrophic Mediterranean Sea Bay
- 11:30-11:50 Dr Lior Guttman: A bacterial-based process for decomposition of *Ulva* cell-wall polysaccharides in biorefinery
- 11:50-12:10 Dr Gabrielle Zammit: Sustained growth in culture of barcoded *Ulva* spp. germlings for bioprocessing

12:10-12:40 Keynote Speaker: Dr Rui Pereira

Ulva production at commercial scale - engineering and beyond

Chair Prof. Ignacio Hernández

12:40-12:50 *Break*

Ulva in Aquaculture, Food and Feed Session- Chair Prof. Ignacio Hernández

- 12:50-13:10 Dr Sophie Steinhagen: Large-scale off-shore cultivation of *Ulva*: seasonality affects the biomass yield, performance, and biochemical profile of the biomass
- 13:10-13:30 Dr Juan Luis Pinchetti: Intensive tank cultivation of *Ulva* in the Canary Islands - the nitrogen influence

13:30-14:40 *Lunch Break* - Dr Leigh Livne is available to assist with COST reimbursement claims

Ulva in Aquaculture, Food and Feed Session 2 - Chair Dr Juan Luis Pinchetti

- 14:40-15:00 Prof. Dr Karel Keesman: Transition of aquaponics towards saltwater: Model-based Design of a Multi-Loop Maraponics System
- 15:00-15:20 Dr Georg Martin: Using *Ulva* to extract nutrients from finfish aquaculture effluents
- 15:20-15:40 Prof. Piero Addis: *Ulva* and its components as potential stimulants in aquaculture feeds: chemosensory response of a valuable sea urchin species

15:40 - 16:00 *Coffee Break and Exhibitions*

16:00 - 17:00 SME Presentations - Chair Prof. Muki Shpigel

- Dr Sotiris Orfanidis presents the database of SEAWHEAT publications
- Pure Algae - Esben Rimi Christiansen
- Algabase - Jose A. Callejo
- The Seaweed Company - Dr Stefan Kraan
- Seakura - Dr Yossi Tal
- Eranova - Xavier Marquat
- Longline - Dr Marta Tirano

17:00 - 18:00 Poster Exhibitions

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08:00-09:00 REGISTRATION (Please sign the daily attendance list each day)

09:00-09:15 COST activities by Dr Leigh Livne

09:15-10:00 Invited Speaker: Dr Stefan Kraan: The opportunity and gaps in *Ulva* aquaculture
Chair: Prof. Bela H. Buck

10:00-10:20 *Coffee Break*

10:20-10:50 Keynote Speaker: Dr Sylvia Strauss
Opportunities for *Ulva* as a sustainable crop in human and animal consumption
Chair: Prof. Bela H. Buck

Ulva in Aquaculture, Food and Feed Session 3 - Chair Dr Sylvia Strauss

- 10:50-11:10 Dr Erik-jan Malta: State of the art of applications of *Ulva* and its extracts in fish and invertebrate aquaculture
- 11:10-11:30 Dr Orhan Tufan Eroldoğan: Effect of dietary non-processed algae meals on nutrient digestibility and inflammatory response of European seabass (*Dicentrarchus labrax*)
- 11:30-11:50 Dr Vincent van Ginneken: The seaweed *Ulva lactuca* as a nutritional 'tool' to prevent Chronic Degenerative welfare Diseases (CDDs) in the human population.
- 11:50-12:10 Dr Laurie C. Hofmann: Packaging solutions from seaweed
- 12:10-12:30 Dr Gülден Gökşen: Fabrication and Characterization of biodegradable film from *Ulva* spp.

12:30-14:00 *Lunch Break & 'Cooking with Ulva' demonstration by Chef Boaz Tsairi*

14:00 - 14:30 Keynote Speaker: Dr Thomas Wichard
Ulva: a model system in chemical ecology - potential applications in aquaculture
Chair: Dr Lior Guttman

Bioactive Products and Associated Microorganisms Session - Chair Dr Gabrielle Zammit

- 14:30-14:50 Dr Aschwin Engelen: *Ulva* microbial contrasts between lagoon and open coast habitats in southern Portugal
- 14:50-15:10 Dr Fatemeh Ghaderiardakani: Three become one in a tripartite community: Reassessing the collaborative adaptation of *Ulva* and its microbiome to cold temperatures in Antarctica
- 15:10-15:30 Dr José Pintado: Shedding light on the *Ulva* holobiont: the role of light in microbial interactions with implication in IMTA-RAS
- 15:30- 15:50 Prof. Antonio Meléndez-Martínez: Carotenoids as versatile compounds for the sustainable production of health-promoting products

16:00 *Coffee Break and Exhibitions*

16:20- 17:30 SME Presentations - Chair Prof. Muki Shpigel

- Olmix - Pi Nyvall Collén
- RecirkFisk - Ola Oberg
- Algae for Future - Dr Rui Pereira
- Blue-Green Technologies - Dr Vincent Van Ginneken
- Alga+ - Dr Helena Abreu & Dr Margarida Martins
- DAS - Dr Avi Griffel

17:30 - 18:30 Poster Exhibitions

20:30: SEAWHEAT dinner (not mandatory) at Hotel del Parador de Cádiz

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08:00-09:00 REGISTRATION (Please sign the daily attendance list each day)

09:00 - 09:30 Keynote Speaker: Prof. John Bolton (*online*)

Two decades of commercial integrated aquaculture of *Ulva* with abalone in South Africa

Chair: Dr Olympia Nisiforou

09:30-10:00 Keynote Speaker: Dr Annette Bruhn

Ecosystem Services of *Ulva*

Chair: Dr Olympia Nisiforou

10:00-10:20 *Coffee Break*

Ecosystem Services Session - Chair Dr Annette Bruhn

- 10:20-10:40 Dr Ricardo Bermejo: Report from the Eklipse Expert Working Group on Ecosystem Services provided by Seaweed Cultivation
- 10:40-11:00 Dr Andreia Freitas: Macroalgae as bioindicator of pharmaceutical's environmental contamination
- 11:00-11:20 Prof. Félix Figueroa: Evaluation of photosynthetic activity by using *in vivo* chlorophyll a fluorescence of *Ulva rigida* cultured under different levels of CO₂, nitrate, and temperature: the ecological and aquaculture implications
- 11:20 - 11:40 Prof. Ignacio Hernández: *Ulva*, seagrasses and ecosystem services: a tale of love and coldness

11:40-11:50 *Break*

11:50 - 12:20 Keynote Speaker: Dr Céline Rebours

Marine biotechnology: RRI, Convention of Biological Diversity, Nagoya Protocol, Access and Benefit-sharing Clearing-house.

Chair: Dr Lior Guttman

Legal, Social, and Regulation Aspects Session - Chair: Dr Céline Rebours

- 12:20 - 12:40 Dr Anna Fricke (*online*): *Ulva* as model organisms in a new approach to urban farming
- 12:40 - 13:00 Dr Karina Balina: Life Cycle Assessment of seaweed cultivation: Opportunities and challenges
- 13:00 - 13:20 Dr Avi Griffel: Risk Assessment of COST Project: Principles and Methods

Closing comments by Prof. Ignacio Hernández, Dr Erik-jan Malta, Prof. Muki Shpigel

BEFORE LEAVING, PLEASE CONSULT DR LEIGH LIVNE TO CHECK YOUR ATTENDANCE AND REIMBURSEMENT CLAIM

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