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ABOUT US

The main aim and objective of the Action are to organize and coordinate an innovative and dynamic Network, connecting academia, industries and water management authorities to advance and apply knowledge and expertise on zoosporic parasites (i.e. aquatic fungi and fungi-like microorganisms) and the relation with their hosts in natural ecosystems and industrial algal biotech production.

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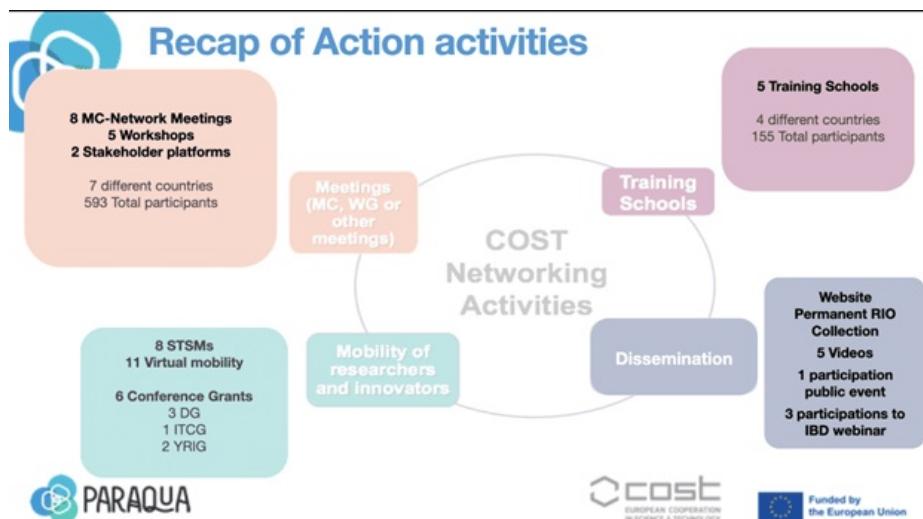


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ParAqua Newsletter #17 - 2025 -
Redaction: Ana Gavrilović and Laura Garzoli, Supervision: Serena Rasconi
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The final meeting of the Action was held on 1-2 September 2025 in Zagreb, Croatia. The meeting was organised by the Science Communication Coordinator Ana Gavrilović and was an opportunity to discuss the achievements, recap all the organised activities and to undertake collaborative work for the finalisation of the scientific objectives of the Action.



In the afternoon, participants attended presentations on progress of running activities. Notably, Blagoy Uzunov presented the collaborative manuscript "Drivers of aquatic zoosporic parasites in natural and artificial environments", followed by the ParAquaSeq workshop, which allowed participants to engage in collaborative discussions and practical exercises.

After the end of the first day, participants joined a very nice guided tour of the historical part of the city and ended the day with a dinner together.

The second day, was dedicated to the ParAqua Grantees Conference. The day was opened by a keynote talk by João Varela on the challenges and potential solutions for detecting and identifying algivores in industrial facilities, followed by presentations of ParAqua Grantees to illustrate results and achievements obtained with the support of the Action Grant awarding system.

During these two days event, 41 participants from 15 countries actively exchanged experiences, discussed methodological innovations, and explored opportunities for collaboration, emphasizing the interdisciplinary and cross-sectoral nature of ParAqua. As always, this event was an excellent opportunity for meeting and discussion, thanks to the active contribution of all ParAqua Members.

Check ParAqua Grantees Conference Abstracts Booklet at this [Link](#) and watch a video produced with pictures collected from participants attending the Meeting



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Spotify



Website

ParAqua Podcast

THE PARAQUA PODCAST



By Joe Money

After three years of podcasting The ParAqua Podcast has come to an end. The final show, featuring ParAqua's own Martyna Budziak is now available to listen to on the website and various streaming platforms.

I've really enjoyed my time as host and producer of the podcast and have met and interviewed some amazing people doing incredible research all around the world.

I'd like to thank Serena Rasconi and Ana Gavrilovic for helping make the podcast a reality and COST EU for providing me with this fantastic opportunity.

Happy listening at ParAqua webpage or choose the channel that you prefer [here](#)

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**From
ParAqua
Grantees**

ParAqua Grantees presented the results of their STSMs at Symposium on Aquatic Microbial Ecology (SAME 18) in Barcelona

By Laura Garzoli

Thanks to the ParAqua Dissemination Grant I presented an oral communication at the SAME 18 Conference in Barcellona this September, based on the results of my ParAqua

Short-Term Scientific Mission (STSM) titled “Microcosms experiments on resting spore germination cues with a phytoplankton-chytrid model system”, which I was granted in July 2024. The work is a shared collaboration carried on at the University of Turku at the laboratory of dr. Silke Van den Wyngaert, thanks also to the supervision of Prof. Alena S. Gsell. The conference was very participated, with more than 300 people were present, and the presentation was very appreciated. Thanks to this, I've gained many ideas for drafting my ERC Starting Grant the next year. I am grateful to COST and ParAqua for this opportunity.



By Pietro Marchese



Thanks to a Young Researcher and Innovator Conference grant sponsored by ParAqua, I was able to attend the 18th Symposium on Aquatic Microbial Ecology.

I shared the results of an experiments carried out during a ParAqua Short Term Scientific Mission verting on the diversity of host microbiota during infection with zoosporic parasites.

The scientific content of SAME 18 was truly inspiring and I had a terrific time in Barcelona with ParAqua colleagues as well as new peers.

Participation at the 43rd Annual Meeting of the European Culture Collections' Organisation

By Gabriel Bombo

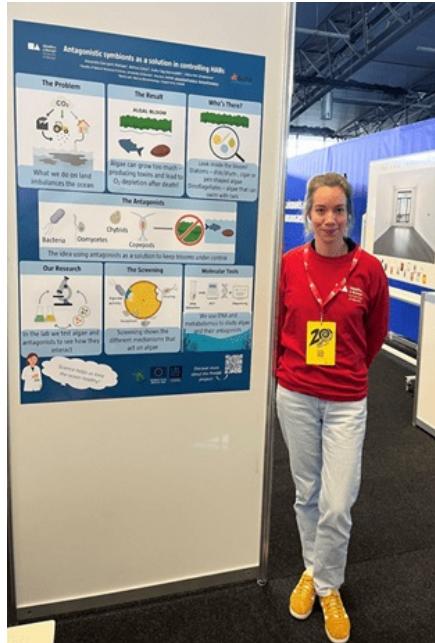
Thanks to the COST action ParAqua grant, I participated at the 43rd Annual Meeting of the European Culture Collections' Organisation (ECCO XLIII) and theyeast.org workshop that was held 15-18 September 2025 in Utrecht, Netherlands. I presented mutual work done with my colleagues Cristina Paulino,

Virtual Mobility Grant experience within the ParAqua COST Action

By Alexandra Georganti Ntaliapi

Mélissa José, Natacha Coelho and Hugo Pereira untitled „Industrial Biotechnology Algal Bank (IBAB): The biobank for industrial production, adding a new feature for the development of new products“.

At the conference and workshop, the leaflet of the ParAqua COST special issue on the Springer Periodic was distributed, what is a way to help consolidate partnerships and disclose the good outputs of this COST action.



My name is Alexandra Georganti-Ntaliape and I am a PhD candidate in the Marie Skłodowska-Curie project PHABB, conducting my doctoral research at the University of Akureyri (UnAk) under the supervision of Oddur Vilhelmsson, Bettina Scholz, Hans Peter Grossart, Auður Sigurbjörnsdóttir, and Justyna Wolinska. My work focuses on antagonistic symbionts and their potential role in controlling Harmful Algal Blooms in coastal areas.

I am very grateful and happy to have received the Virtual Mobility Grant from the ParAqua COST Action, titled "Connecting Science and People: ParAqua Achievements." The goal of this VM was to create a dissemination flyer summarising the main achievements of ParAqua, presenting its scientific results and highlighting its inclusive and interdisciplinary community in a clear and visually engaging way.

Through UnAk, I also had the wonderful opportunity to participate in V-VAKA, an outreach event dedicated to communicating science to the public and children, where I shared insights about my research and the importance of aquatic ecosystems.

I am also delighted to announce my upcoming secondment at the Institut de Ciències del Mar (ICM-CSIC) with Dr. Albert Reñé, focusing on phytoplankton blooms along the Catalan coast, a valuable step forward in my research journey.

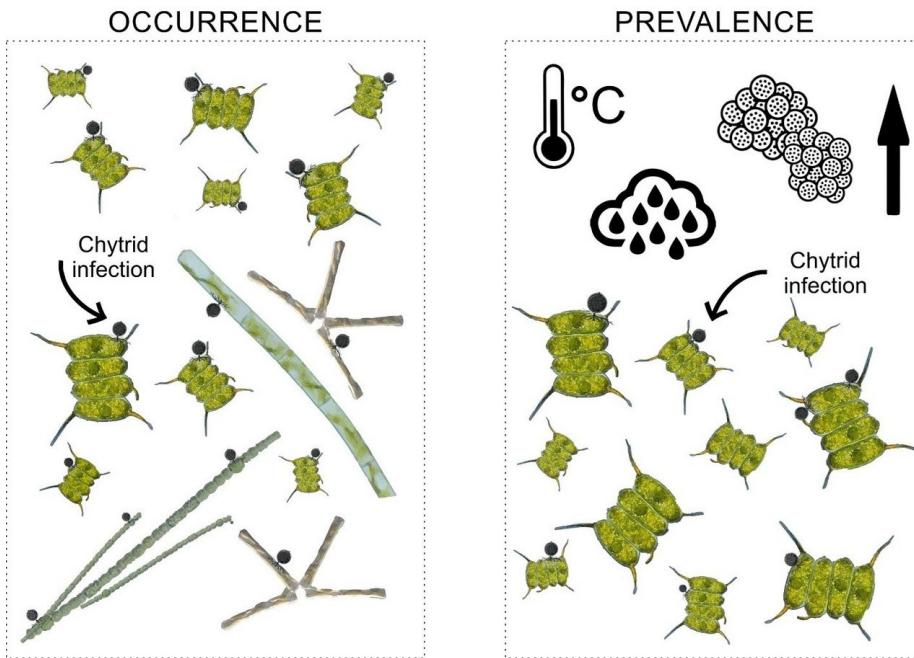


Members

Publication of the ParAqua STSM results

By Martyna Budziak

Members of the ParAqua network have recently shown that climate-driven environmental change can significantly influence parasitic interactions between chytrid fungi and freshwater phytoplankton. By examining several years of environmental data and phytoplankton communities, the study revealed that chytrid infection occurrence and prevalence is highly variable in space and time. Warmer temperatures, greater rainfall, and the presence of cyanobacterial blooms all coincided with increased chytrid prevalence on green algae. These results suggest that ongoing climate change may intensify parasitic pressure in freshwater ecosystems, with possible consequences for food-web functioning and ecosystem health.



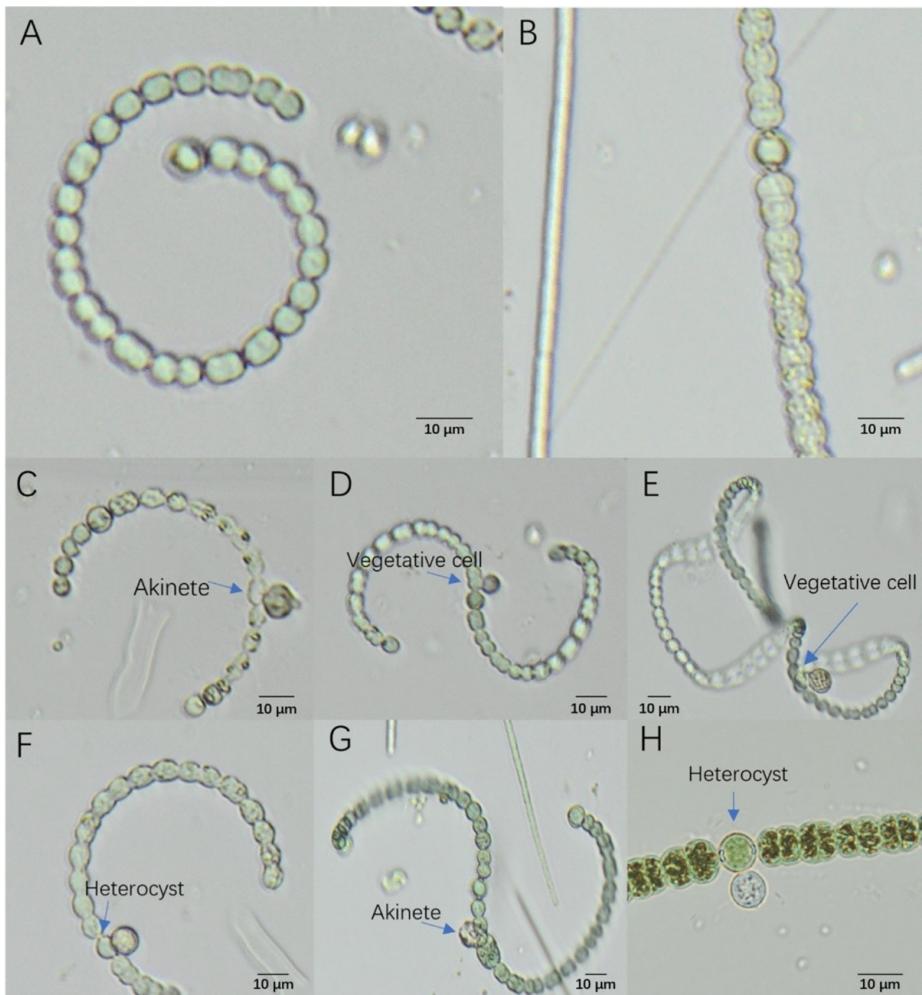
The study *Phytoplankton under pressure: temperature, precipitation and cyanobacterial blooms as drivers of chytrid infections* was carried out by ParAqua members from the Institute of Nature Conservation, Polish Academy of Sciences, Kraków, Poland and the Leibniz Institute of Freshwater Ecology and Inland Fisheries, Neuglobsow, Germany, together with collaborators. The author team includes Martyna Budziak, Doris Ilicic, Hans-Peter Grossart, Wojciech Krztoń, Edward Walusiak, Janusz Fyda and Elżbieta Wilk-Woźniak. This work was supported by a Short-Term Scientific Mission and contributes directly to the goals of WG1 and WG2.

If you're interested in learning more, the full article can be found [here](#)

A newly isolated chytrid fungus specialized in parasitizing heterocysts of the filamentous cyanobacterium *Dolichospermum* sp.

By Bastiaan Willem Ibelings

We report a novel chytrid species strictly infecting heterocysts of the N₂-fixing cyanobacterium *Dolichospermum* sp. Read full paper [here](#)



Light microscopy of the two *Dolichospermum* morphotypes and their associated chytrid species. **A, B** Coiled and straight *Dolichospermum*, respectively. **C-G** Chytrids infecting different cell types of *Dolichospermum*. **H** Chytrid infecting a heterocyst of the straight *Dolichospermum* type. Scale bar: 10 µm

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Recent activities of ParAqua members

Online Training Webinar by A4F: Biological Contaminants and Microalgae Crop Protection



Serena Rasconi participated on November 11 to the "Online Training Webinar by A4F: Biological Contaminants and Microalgae Crop Protection", a series of training webinars organised by European Pilot and Demonstration Infrastructures (PDIs) as part of the COPILOT/PILOTS4U "Scale-Up & Growth" Programme. In the talk "Zoospore identification, characterisation and mitigation strategies: The COST Action ParAqua" were presented the tools and protocols developed by the common efforts done in ParAqua to advance knowledge about zoospore parasites.

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Ergeva: the Beating Heart of

News from

Agri-Tech Innovation in Central Italy

By Antonio Idà

ParAqua members

A New Life for Innovation and Sustainability

Ergeva is the new agri-technological hub transforming former industrial spaces in San Lorenzo in Campo (PU) into a vital ecosystem for research, innovation, and sustainability.

The project takes shape under the leadership of **Enereco SpA**, in strategic synergy with **Algoria**.

Where Technology Meets Nature

Our facilities include:

- **Algae Cultivation Laboratory** — pioneering biotechnological solutions for the future of food and energy.
- **Agrivoltaic Park** — combining renewable energy with agricultural productivity.
- **Research & Innovation Hub** — connecting people, ideas and technology.

A Network that Grows Together - Ergeva connects universities, research centers, startups and local enterprises, fostering a dynamic ecosystem where partnerships generate new opportunities and sustainable success.

Our Mission: To drive innovation through sustainability and to position Central Italy as a leading example of green technology and circular economy.

Join Us and be a part of a community that's rethinking the future — one project, one idea, one innovation at a time.

Discover Ergeva Grow the future with us!!

[LINK](#)

News from Algen

By Maja Berden Zrimec

Algen colleagues have been finalising the two demo sites in Greece: 1000 m² pond system for FuelPhoria project in Thessaloniki, and four smaller ponds in Lavrion for the Cronus projects. Algae are already growing at both sites, utilising CO₂ and anaerobic digestate for nutrients.

Additionally, greenhouse experiment has been performed in Ljubljana CAT centre for algal technologies, testing the N-limitation approach to increase lipid content in *Desmodesmus* (*Scenedesmus*) *dimorphus* cells grown in digestate.



FuelPhoria demo installation (Photo: QLab)



Cronus algal demo installation (Photo: NTUA)

In the scope of FuelPhoria development of protocols for the biofuel production from

algae grown on anaerobic digestate to recycle waste nutrients, lipid stimulation experiment with N-limitation was performed in CAT centre for algal technologies in Ljubljana, Slovenia. CAT greenhouse hosts three identical runway ponds for comparison tests of different exposures for algal cultures.

Algen also participated in the second EU Algae Awareness Summit, organised in Berlin on 16 and 17 October 2025, that brought together over 250 participants to explore how algae can contribute to Europe's blue bioeconomy, food security, climate neutrality, and ocean restoration

On the right: Lipid stimulation experiment with algae grown in digestate (FuelPhoria project) (Photo: Algen)



Participants of the second EU Algae Awareness Summit
(Source of photo: Directorate-General for Maritime Affairs and Fisheries [blog](#))



Biotechnology Congress 2025 Successfully Held in Tirana

By Ariola Bacu

For the first time, the European Biotechnology Congress was held in Tirana, Albania, from 11 to 13 September 2025. The event gathered more than 200 researchers, lecturers, industry representatives, and students from Europe, North America, Asia, the Middle East, Australia, China and other regions. It was organized by the European Biotechnology Thematic Network Association (EBTNA), with the strong support of the Academy of Sciences of Albania and the University of Tirana, and with COST Action RECROP and MAGI Balkans Srl also contributing to the scientific programme and workshops.





ParAqua Action, the Chair for Local Organizing Committee and the National Coordinator of EBTNA in Albania, explained the content of the scientific programme featuring 14 thematic sessions covering a wide range of biotechnological fields, including animal, medical and environmental biotechnology, genomics, bioinformatics, nanobiotechnology, bioprocess and metabolic engineering, tissue engineering and bioethics. The congress also included several satellite events and specialized workshops, such

as Workshop on Biosensors - based Cytotoxicity Testing (supported by the Academy of Sciences of Albania), Workshop on Medical Genetics-3rd Course (supported by MAGI Balkans), and a dedicated workshop by COST Action RECROP. Also, a Training School in Bio-entrepreneurship in Biotechnology was supported by the Academy of Sciences of Albania in the framework of the project BioSensToxicWater, which provided young scientists with practical skills for innovation and technology transfer (pictures attached).

A strong emphasis was placed on the participation of early-career researchers and students. Hands-on sessions, poster presentations and the 3rd Biotechnology Course of MAGI Balkans offered valuable learning and networking opportunities, particularly for students of the University of Tirana.

International and Albanian research teams presented advanced studies in genomics, medical and pharmaceutical biotechnology, plant biotechnology, biosensors and nanobiotechnology, animal biotechnology and aquaculture, industrial and environmental biotechnology, demonstrating the growing scientific capacity of local institutions. Researchers from North Macedonia, Kosovo, Bulgaria, Romania, Greece and other countries highlighted the importance of cross-border collaboration and the emergence of a strong Balkan biotechnology network aligned with European scientific priorities. Outstanding contributions were recognized through awards for best oral presentations, given to Laurine Lagache, Tristan Cardon, Elsa Morina and Sara Feizyab, and for best posters, awarded to Piemonti Debora, Chiara Coppola, Suzanna Fekner and Christian Gratz.

With Tirana designated as the Mediterranean Capital of Culture and Dialogue 2025, the congress reaffirmed Albania's role as a regional hub for scientific innovation and cooperation. The European Biotechnology Congress 2025 demonstrated the strategic relevance of the Balkans in biotechnology, the growing capacity of regional universities and research centers, and the importance of connecting international innovation with local development.



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**Deadline extended!
Special Issue in
Aquatic
Ecology about
"Zoosporic
Parasites of
Primary
Producers in
Aquatic
Systems" is
now open for
submission!!!!**

*By Serena Rasconi, Maja
Berden Zrimec, Manuela Coci
& Dedmer Van de Waal*

Announcements

New collection deadline : 30 March 2026 !!!!!

All the information at the Journal webpage at this

LINK

This special issue aims to focus on the topic of parasites of aquatic primary producers across different sectors (research in aquatic ecology and evolution as well as in algal biomass R&D and production systems). The Guest Editors are participants of the EU funded COST Action ParAqua (Applications for zoosporic parasites in aquatic environments), aiming to advance and share knowledge about parasites of micro and macro algae and the relation with their hosts in natural ecosystems and industrial production facilities.

Scientific research on this topic is gaining traction with increasing studies elucidating the functional role of zoosporic parasites in natural ecosystems, while main challenges remain related to the economic impacts of parasitic diseases in algae biotech industry, affecting production of food, feed, biofuels and nutraceuticals. ParAqua aimed to fill this knowledge gap by integrating interdisciplinary efforts to compile information on the occurrence of zoosporic parasites and their relationship with hosts, elucidate drivers of infection and implement new tools for monitoring and prevent infections in natural and artificial production systems.

We would like to invite contributions from the Action's work but also broaden the call to all interested colleagues to increase visibility of the topic and dissemination of results within the scientific community. Expected contributions will include original articles, conceptual papers and reviews on micro and macro parasites of aquatic primary producers (cyanobacteria, algae, macroalgae and seaweeds) in different systems (including natural ecosystems, experimental tests, industrial algal biotech production plants etc.), investigations into the host-parasite relation and main drivers of infections with a particular focus on the effects of climate change. Contributions on methods for detecting and managing infections, as well descriptions of infection dynamics under different settings, including industrial production facilities will be also welcome.

Topics:

- **Host-parasite relation**
- **Drivers of infections**
- **Methods for detecting and managing infections**
- **Descriptions of infection dynamics**
- **Effects of parasitism on aquatic (eco)system performance**
- **Zoosporic parasite physiology and virulence**

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ParAqua Management



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#ZoosporicParasites
#AlgaBiotech

A MESSAGE FROM COST PROGRAMME

by Lorna Stokes

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Voor een goede ontvangst voegt u anag@unipu.hr toe aan uw adresboek.