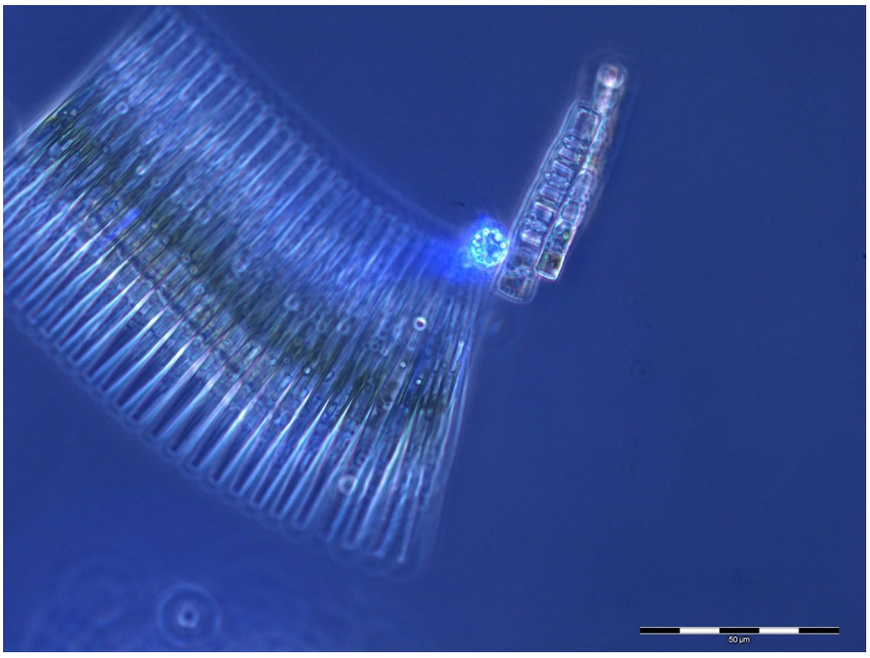
March 2024 - ISSUE #11

NEWSLETTER



Courtesy of Alena Gsell

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PARAQUA PAST EVENTS
The ParAqua "Writing Retreat" Workshop was held at the INRAE center in Lyon - Villeurbanne

PARAQUA UPCOMING EVENTS
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ParAqua Training School "Management of zoosporic infection in algal biotech"

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NEW PARAQUA PRODUCT
Zoosporic Parasites Method Booklet

ACTIVITIES OF PARAQUA MEMBERS
A new equipment "MicroDeep" from Zorth have been acquired and for the fast characterization of microalgae cultures

News from Algen

JOB ANNOUNCEMENTS
New call for 2 Post-doc positions at IRSA Verbania

PARAQUA STMS and VM ANNOUNCEMENTS

CA20125- COST ACTION

PARAQUA

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.

WEBSITE

SOCIAL MEDIA

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ParAqua Newsletter #11 – 2024 –
Redaction: Ana Gavrilović and Laura Garzoli
Contact: paraqua[@]inrae.fr; communication[@]paraqua-cost.eu

ParAqua Past Events

The ParAqua "Writing Retreat" Workshop was held at the INRAE center in Lyon - Villeurbanne from 29 to 31 January 2024

By Serena Rasconi

Organised by WG4, the workshop had the objectives to advance the preparation of ongoing scientific deliverables (databases, review papers, method papers...) and launch new activities proposed by ParAqua young Members.
Read more about the workshop and download the presented materials on ParAqua website at this Link

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ParAqua Upcoming EVENTS

ParAqua Conference "Applications for zoosporic parasites in aquatic systems" will be held from 15-17 April 2024 in Dubrovnik (Croatia) and virtual from April 15th

By Serena Rasconi and Ana Gavrilović

The MC meeting and the first ParAqua Conference "Applications for zoosporic parasites in aquatic systems" organized by WG4 will be held in the Student Center in Dubrovnik. Looking forward to welcome you in this ancient, walled medieval city on the Adriatic Sea😊. Read more about the conference, shared scientific experience and participant's impressions in our next Newsletter.

Attention!

Applications are still open!!!

ParAqua Training School "Management of zoosporic infection in algal biotech"

By Francisco Gabriel Acién Fernández and Serena Rasconi

Read more and apply here

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Recent publications of ParAqua members

Planktonic Marine Fungi: A Review

By Serena Rasconi

Our ParAqua members Michael Cunliffe and Hans-Peter Grossart are co-authors of the very interesting review on marine fungi:
Peng et al. (2024). Planktonic Marine Fungi: A Review. Journal of Geophysical Research: Biogeosciences 129,e2023JG007887.
Read full article at this Link

The chytrid insurance hypothesis: integrating parasitic chytrids into a biodiversity–ecosystem functioning framework for phytoplankton–zooplankton population dynamics

By Serena Rasconi

New Open Access article "The chytrid insurance hypothesis: integrating parasitic chytrids into a biodiversity–ecosystem functioning framework for phytoplankton–zooplankton population dynamics" was recently published in Oecologia as part of the special issue "Parasites in Aquatic Ecology".
Read the full collection at this Link

Long-term evaluation of productivity and harvesting efficiency of an industrial Spirulina (Arthrospira platensis) production facility

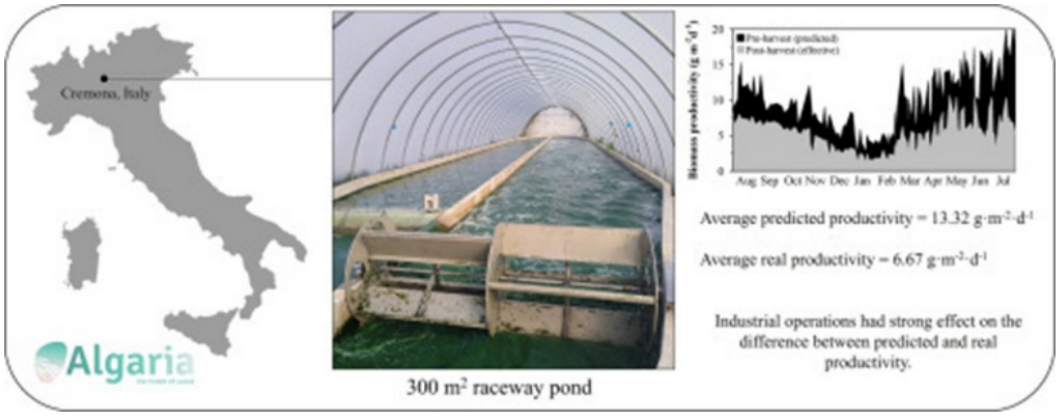
By Francisco Gabriel Acién Fernández

A new paper Krupan et al. (2024), published in Bioresource Technology Reports, analyzing the long-term stability of Spirulina production at indutrial scale. It presents a good example of cooperation between industry (Algaria) and science (University of Almeria), both members of ParAqua. Reed more at this Link

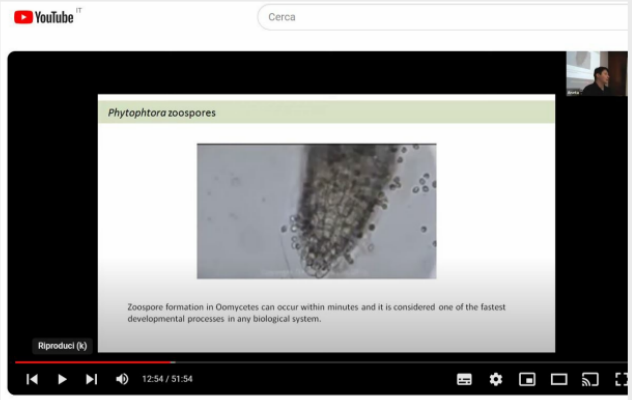
Molecular metrics to monitor ecological status of large rivers: Implementation of diatom DNA metabarcoding in the Joint Danube Survey 4

By Kálmán Tapolczai

Our new paper published in Ecological Indicators studies the applicability of DNA metabarcoding in the diatom based bioassessment of the Danube river within the 4th JointDanubeSurvey. If interested read more at this Link



New ParAqua product



6.Caio Cesar Pires de Paula & Dagmara Sirova_Ocurrence of zoosporic fungi in aquatic systems and m

Zoosporic Parasites Method Booklet

By Serena Rasconi and Ana Gavrilović

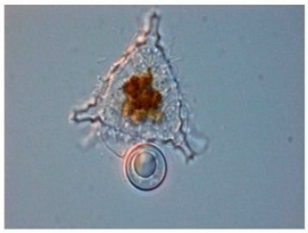
Method booklet is prepared from the trainings presented at the Training Schools organised during the Action ParAqua. It contains three chapters:

1. Algae Cultivation,
2. Parasites identification and isolation
3. Parasites drivers

Link to the video lectures are indicated next to each subchapter when available. These materials are open and can be downloaded and used to make derivative works by giving credits to the authors. Find the booklet at this Link

ParAqua STMS and VM Announcements

Microscosm experiment(s) with a phytoplankton-chytrid model system
University of Turku (FI)



Hosts to contact:
Local supervisor: Silke Van den Wyngaert (silkevandenwyngaert@utu.fi)
External supervisors: Alena Gsell (alena.gsell@gmail.com) and Laura Garzoli (laura.garzoli@cnr.it)

Main topic and expertise of the hosting institutes:
Genetic, phenotypic and functional diversity of of phytoplankton-chytrid interactions in time and space. Ecophysiology and life history. Cultivation and microscosm experiments with model pathosystems. Theoretical simulations

Main purpose of the STSM
The aim of this STSM project is to conduct **microscosm experiment(s) with a phytoplankton-chytrid model system** to elucidate the triggers for chytid resting spore formation and germination. The applicant should have basic lab skills (and preferably basic microscopy skills).

Please consult https://paraqua-cost.eu/grants-open-calls/ before applying

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How different OM inputs affect fungal parasites diversity and occurrence
UMR INRAE CARRTEL – Thonon les Bains (FR)

Hosts to contact:
Serena Rasconi – serena.rasconi@inrae.fr
UMR INRAE CARRTEL – Thonon les Bains (FR)

Main topic and expertise of the hosting institutes:
CARRTEL (Alpine Center for research on trophic networks and lake Ecosystems) performs research to understand how human and environmental stressors affect the functioning of lakes and the ecosystem services which are provided, such as food, drinking water, biodiversity.

Main purpose of the Project:
The project is proposed as 5-6 weeks STSM or VM to **analyse an existing dataset** acquired during a mesocosm experiment **aiming to investigate parasitic fungi taxonomic diversity in simulated scenarios of different Organic Matter quality inputs**.The complete panel of different measures and data includes specific fungi and eukaryotic diversity (DNA transcripts) and complete physico-chemical characterisation (https://doi.org/10.1016/j.dib.2023.109302).

CARRTEL CENTRE ALPIN DE RECHERCHE SUR LES RÉSEAUX TROPHIQUES ET ÉCOSYSTÈMES LIMNIQUES

INRAE AQUA

Please consult https://paraqua-cost.eu/grants-open-calls/ before applying

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Collect samples for parasites monitoring
I.A.CO Environmental & Water Consultants Ltd - Cyprus (CY)

I.A.CO Ltd Environmental & Water Consultants

Hosts to contact:
Ayis Iacovides - a.iacovides@iaco.com.cy
Athina Papatheodoulou - athina.papatheodoulou@gmail.com
I.A.CO Environmental & Water Consultants Ltd - Cyprus (CY)

Main topic and expertise of the hosting institutes:
Water Bodies Assessment (mainly permanent and intermittent rivers, but also natural lakes, salt lakes, natural & artificial wetlands)
- Using bio-indicators (macrophytes, diatoms, invertebrates, fish)
- Physicochemical Assessment and Hydromorphological Assessment

Main purpose of the STSM

Trainees can be hosted for 1-2 weeks to collect samples from the different water bodies in Cyprus to be consequently analysed in the home institution for parasite monitoring.
Info from local environments can be also collected for metanalysis of parasites in different environments, including ecosystems typical of eastern dry Mediterranean and water bodies undergoing intense water scarcity periods.

Please consult https://paraqua-cost.eu/grants-open-calls/ before applying

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Monitoring and check routine analysis for contaminants in a production systems
Algaria Srl – Milano, Italy (IT)

SPIREAT
SPIRULINA PURA

Hosts to contact:

Antonio Idà – antonio@spireat.it
Algaria Srl – Milano, Italy (IT)

Main topic and expertise of the hosting institutes:

Algaria is a SME based in northern Italy that develops research and innovation in the field of super-food production (especially microalgae Spirulina).

Main purpose of the STSM

Young biologist or biotech engineer (within 2-3 years of the PhD), preferably with previous experience in growing *Spirulina* is welcome to apply for a STSM of 2-3 weeks.
Aim of the mission will be to **test production system, monitoring of the production facility and check routine analysis for contaminants**, such as sampling, microscope analysis, spectrophotometry (with the index of 750 /630), photosynthetic efficiency.
The goal will be to check the stability of the culture or underline the presence of alien species with the final aim to **set up for industrial upscaling**.

Please consult https://paraqua-cost.eu/grants-open-calls/ before applying

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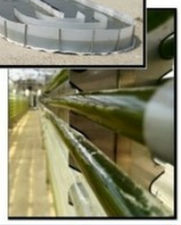
Detecting and quantifying parasitic fungi in microalgal large-scale facilities
University of Almeria (ES)

Hosts to contact:

Francisco Gabriel Acién: facien@ual.es
Ana Sánchez Zurano: asz563@ual.es
Department of Chemical Engineering, University of Almeria (ES)



Main topic and expertise of the hosting institutes:

Microalgal production systems from lab-scale up to industrial scale using different systems such as external photobioreactor and closed photobioreactor.
Strains: Different microalgal and cyanobacteria strains (e.g. *A. platensis, S. almeriensis, C. vulgaris, N. gaditana, T. chuii...)*
Media: freshwater, seawater, wastewater...

Main purpose of the STSM:

Detecting and quantifying parasitic fungi in microalgal large-scale facilities
The facility can provide: Optical microscope, Nucleic acid services from UAL (DNA extraction, PCR, DNA sequencing, Digital images analysis, support to write reports/papers
Students/Experts **focus on microalgal parasites for identification, quantification and eradication are welcome to apply**

Please consult https://paraqua-cost.eu/grants-open-calls/ before applying

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Virtual Mobility Grant – proposed topic

ParAqua Webinar series

Open topic for ParAqua Virtual Mobility Grant to organise and moderate a **Webinar series on topic related to zoosporic parasites** (monitoring, drivers, control and applications in aquatic systems…)

The webinars will be open to the scientific community (announced on the Action website and Social Media), held virtually and recorded for **diffusion on the ParAqua YouTube Channel**.

The application should describe the proposed topics and identify tentative speakers. We expect a **broad panel of orators from different sectors** (academia, industry, water management) covering different topics of interest for the Action and bringing contribution to the Action MoU objectives.

Suggested time: May - September 2024 (5-6 webinars on a monthly basis)

Please consult https://paraqua-cost.eu/grants-open-calls/ before applying

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Job announcement

New call for two Post-doc positions at CNR-IRSA Verbania, Italy

By Laura Garzoli

Project title: BIODIVERSA+ FUNACTION - Aquatic fungal biodiversity: developing knowledge and strategies to inform conservation priorities and measures
Project webpage: https://funaction.eu/
Call description: (in Italian, the translation below): https://www.urp.cnr.it/system/files/2024-03/Bando%20Funaction%20PhD%20Garzoli_signed.pdf
Referent: Laura Garzoli laura.garzoli@cnr.it
Length of the contract: 20 months (with the possibility of extension) – 2 positions available
Workplace: CNR-IRSA National Research Council of Italy, Water Research Institute, Largo Tonolli 50, 28922 Verbania (Italy)

Application deadline: 29 March 2024
Criteria for selection: Bachelor's and/or MD in one of the following sectors (Natural Sciences, Biological Sciences, Environmental Sciences, Geological Sciences, Forestry Sciences, Agricultural Sciences, Computer Science, Mathematics, Environmental and Territorial Engineering, Computer Engineering, Biotechnology) and a Ph.D. title (with a minimum three-year duration); experience in the field specified in Article 1 and 3 of the scholarship, declared according to the procedures outlined in Article 4. We are looking for candidates with experience in one or more of the following areas: microfungal taxonomy, microbiology, characterization of fungal molecules and enzymes, data analyses (amplicon and shotgun sequencing). Candidates should be proficient in the English language; for foreign candidates, basic knowledge of the Italian language is appreciated.
Application procedure: Italian applicants should send the documents by means of certificate mail (PEC) at protocollo.irsa[at]pec.cnr.it. Foreign applicants should send an email to concorsi[at]irsa.cnr.it Subject of the email must contain "IRSA AdR 09-2024 VB"
Read carefully all the instruction and compile the format ("ALLEGATO A") available in the call document.
A summary of documents that needs to be provided is listed below:
- a CV in PDF format.
Important #1: The CV has to be signed!
Important #2: The CV should list all elements useful for the evaluation (NOT a Narrative/Descriptive CV). Please include specific dates for each of your experience.
- A valid ID (e.g., passport)
- Annex A, B, and C, which are found at this link:
Unfortunately, Annex A–C are in Italian. If you don't understand, you can try with ChatGPT or Google translator or ask me :-) (laura.garzoli[at]cnr.it)
Selection procedure: Selected candidates (based on the evaluation of the CV) will be invited for an interview, either in-person or online.

Summer School Announcement

By Francisco Gabriel Acién Fernández

ParAqua Management

PARAQUA	Main Contacts and Leadership	
MC Chair	**Serena Rasconi (France)**	**serena.rasconi@inrae.fr**
MC Vice Chair	Alena Gsell (The Netherlands)	a.s.gsell@cml.leidenuniv.nl
WG1 leader	**Albert Reñé (Spain)**	**albertrene@icm.csic.es**
WG1 co-leaders	Andrea Tarallo (Italy) Laura Garzoli (Italy)	andrea.tarallo@cnr.it laura.garzoli@cnr.it
WG2 leader	**Position open!** **Interested members are invited to apply!**	
WG2 co-leader	Hans-Peter Grossart (Germany)	hgrossart@igb-berlin.de
WG3 leader	**Francisco Gabriel Acien Fernandez (Spain)**	**facien@ual.es**
WG3 co-leader	Maja Berden Zrimec (Slovenia)	maja@algen.si
WG4 leader	**Position open!** **Interested members are invited to apply!**	
WG4 co-leader	Miloš Stupar (Serbia)	smilos@bio.bg.ac.rs
Science Communication Coordinator	**Ana Gavrilovic (Croatia)**	**agavrilovic@agr.hr**
Science Communication Coordinator Co-Leader	Fusun Akgul (Turkey)	fusunnakgul@gmail.com
Grant Awarding Coordinator	**Andrea Tarallo (Italy)**	**andrea.tarallo@cnr.it**
Grant Awarding Coordinator Co-Leader	Veljo Kisand (Estonia)	kisand@ut.ee
Action Moderator	**Bastiaan Ibelings (Switzerland)**	**Bastiaan.Ibelings@unige.ch**

Action Co-Moderator	Dedmer van de Waal (The Netherlands)	d.vandewaal@nioo.knaw.nl

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TAGS

#ParAqua
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#AlgaBiotech

A MESSAGE FROM COST PROGRAMME

by Lorna Stokes

Be sure to tag COST and #COSTactions in your social posts because we're always happy to engage:

Twitter: @COSTprogramme
LinkedIn: COST Association - European Cooperation in Science and Technology
Facebook: COST Association - European Cooperation in Science and Technology
Instagram: @cost_programme
YouTube: COST - European Cooperation in Science and Technology

Newsletter: we distribute a monthly newsletter, sign up (form located at the bottom of our website homepage)

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