



## WG1 | STSM | SERBIA

### Parasites detection and identification with special emphasis on cyanobacteria occurrence and cyanotoxin production

**Host Institution:** Institute of Public Health of Serbia 'Dr Milan Jovanovic Batut' – Belgrade, Serbia (RS)

**Supervisors:** Jelena Jovanovic ([jelena\\_jovanovic@batut.org.rs](mailto:jelena_jovanovic@batut.org.rs))

Institute of Public Health of Serbia 'Dr Milan Jovanovic Batut' - Serbia

and Ivana Trbojevic ([itrbojevic@bio.bg.ac.rs](mailto:itrbojevic@bio.bg.ac.rs))

University of Belgrade, Faculty of Biology - Serbia (RS)

**Recommended Timeframe:** 2-3 weeks

#### Main topic and expertise of the hosting institutes:

- Monitoring phytoplankton composition, abundance and biomass in water bodies intended for human consumption (mainly water supply and recreation) as indicators of environmental health;
- Controlling the abundance of cyanobacteria, their biomass and cyanotoxin production and assessing the risks concerning the occurrence of toxic cyanobacterial blooms

#### Aim:

Investigate parasites of phytoplankton and cyanobacteria, and relate their occurrence to cyanobacteria biomass and nutrients (N, P) in natural and semi-natural ecosystems (e.g. lakes and reservoirs for drinking water).

#### Specific Requirements:

The STSM applicant is a specialist in parasites detection and identification (epifluorescence microscopy preferred).

#### Expected outcome:

The applicant will write a report on the findings of the STSM. The results will be presented during one of the meetings of the ParAqua Action (e.g. MC2 in Cyprus)

The mission will be the opportunity to transfer the candidate's expertise in parasites identification to the collaborators at the host institute. Organising some specific joint sessions dedicated to the identification of parasites will be a plus.



## WG1 | STSM | CYPRUS

### Parasites sampling in the Mediterranean area

**Host Institution:** I.A.CO Environmental & Water Consultants – Cyprus (CY)

**Supervisors:** Athina Papatheodoulou ([athinap@iaco.com.cy](mailto:athinap@iaco.com.cy))

Zoe Makridou ([z.makridou@iaco.com.cy](mailto:z.makridou@iaco.com.cy))

Chrystalleni Costa ([c.costa@iaco.com.cy](mailto:c.costa@iaco.com.cy))

I.A.CO Environmental & Water Consultants – Cyprus (CY)

**Recommended Timeframe:** 1-2 weeks, preferred period is spring or summer

**Main topic and expertise of the hosting institutes:**

- Water Bodies Assessment (natural lakes, salt lakes, natural & artificial wetlands, permanent and intermittent rivers)
- Using bio-indicators (macrophytes, diatoms, invertebrates, fish)
- Physicochemical Assessment
- Hydromorphological Assessment

**Aim:**

Trainees can be hosted for 1-2 weeks STSM with the purpose to collect samples from the different water bodies in Cyprus.

Info from local environments can be also collected for meta-analysis of parasites in different environments, including ecosystems typical of eastern dry Mediterranean and water bodies undergoing intense water scarcity periods.

**Expected outcome:**

The applicant will write a report on the findings of the STSM and a scientific article written in collaboration with the host supervisors. The results will be presented during one of the meetings of the ParAqua Action (e.g. MC2 in Cyprus) and published in a scientific article.



## WG1 | STSM | NORWAY

### Genetic approaches to detect parasites in waste waters

**Host Institution:** Aquateam COWI AS – Oslo Norway (NO)

**Supervisor:** Janka Dibdiakova ([jadi@cowi.com](mailto:jadi@cowi.com))  
Aquateam COWI AS – Oslo Norway (NO)

**Main topic and expertise of the hosting institutes:**

- Water and wastewater treatment, management and treatment of sludge, sediment and soil.
- R&D studies on the possibilities of recovering nutrients from waste and wastewater fractions such as rejected water at wastewater plants, anaerobically digested sewage sludge and organic waste, ecotoxicity of fresh and marine water, and life cycle assessment.

**Aim:**

STSM of 1-2 weeks is welcome to learn genetic approaches to detect bacteria/parasites in used waters from different sources using our biology lab facilities.

**Expected outcome:**

The applicant will write a report on the findings of the STSM and a scientific article written in collaboration with the host supervisors. The results will be presented during one of the meetings of the ParAqua Action (e.g. MC2 in Cyprus).

## WG1 | STSM | ITALY



### Test algal production system for industrial upscaling

**Host Institution:** Algaria Srl – Milano, Italy (IT)

**Supervisors:** Antonio Idà ([antonio@spireat.it](mailto:antonio@spireat.it))

**Recommended Timeframe:** 2-3 weeks, starting from mid-June 2022

#### 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).

Algaria is active in the soil-less production of food ingredients and products based on a specific microalga (Spirulina), with the brand: <https://spireat.it/>. Algaria's brand is already one of the leading ones in Italy and EU. Different innovative Spirulina-based food products with improved nutritional values are on the market, such as snack bars, risotto. Recently, Algaria succeeded in the EU-contest Ecotrophelia for innovative-sustainable food, in partnership with the University of Milan, launching a new chips snacks protein-rich based on Spirulina.

Algaria's productive and experimental site is located in Casalbuttano (CR, Italy). The technology includes the integration to a biogas co-generation unit, which allows recovering heat and producing continuously, over wintertime in rigid climates. An innovative membrane-based extraction unit allows the co-production of food-grade Phycocyanin pigment from Spirulina, used in the food industry as blue-dye with antioxidant and anti-tumoral properties.

Algaria has also recently developed an innovative biomimetic technology based on microbial electrochemistry: the e-Soil ([www.e-soil.net/](http://www.e-soil.net/)). This technology behaves like an artificial soil, by stimulating microbial mineralization of organic compounds, using electroactive microbial population and conductive materials. The e-Soil, applied to microalgae cultivation, is object of a patent deposit pending by Algaria (International deposit N. PCT/IB2019/060329 del 29 Novembre 2019, ITALY - N. 102018000010683 - 29/11/2018). This technology would allow the production of soil-less food, using fully-recycled nutrients sources, such as secondary products, process water from food transformation industries and food waste. Algaria's objective is to bring this technology to full-scales applications in microalgae production and to apply it to other types of soil-less farming, such as hydroponic horticulture.

#### Aim of the mission:

Testing production system and new technology in the facility

Monitoring production facility with the final aim to set up for industrial upscaling

#### Specific Requirements:

The STSM applicant is a young biologist or biotech engineer (within 2-3 years of the PhD), preferably with previous experience in growing *Spirulina*

#### Expected outcome:

The applicant will write a report on the findings of the STSM. The results will be presented during one of the meetings of the ParAqua Action (e.g. MC2 in Cyprus). The mission will be the opportunity for the candidate to work in a partner company which is currently expanding and searching for junior partners to be integrated in the staff.