

## WHO WE ARE

- A public culture collection hosted by the University of Liège.
- One of the seven decentralized Culture Collections, coordinated by a central team at the Belgian Science Policy Office (BELSPO).
- >500 cyanobacterial strains from different ecosystems worldwide.
- ≈140 strains from polar, subpolar or alpine environments.
- An ISO 9001 certificate covers the public deposition & distribution of strains, as part of a multi-site certification for the BCCM consortium.

## OUR RESEARCH

- Deposited strains are studied by combining morphological, molecular and ecological data (i.e., polyphasic approach studies)
- Bioactivity screening assays (antibacterial, antifungal) to discover new molecules with potential pharmaceutical applications.
- Whole-genome sequencing and comparative genomics to study interesting morphotypes, bioactive metabolite-producing strains, and to understand the basis of adaptations to extreme conditions.

## SERVICES PROVIDED BY BCCM/ULC

### Strain deposit

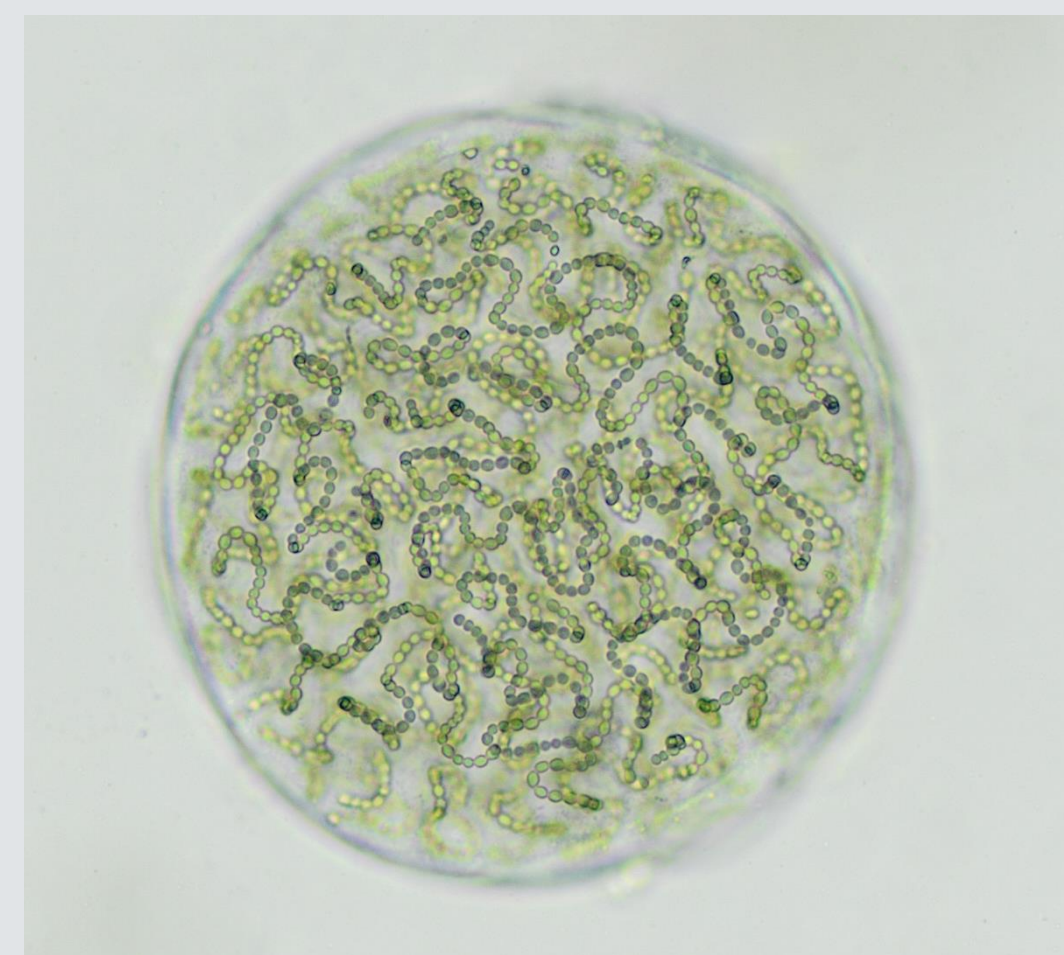
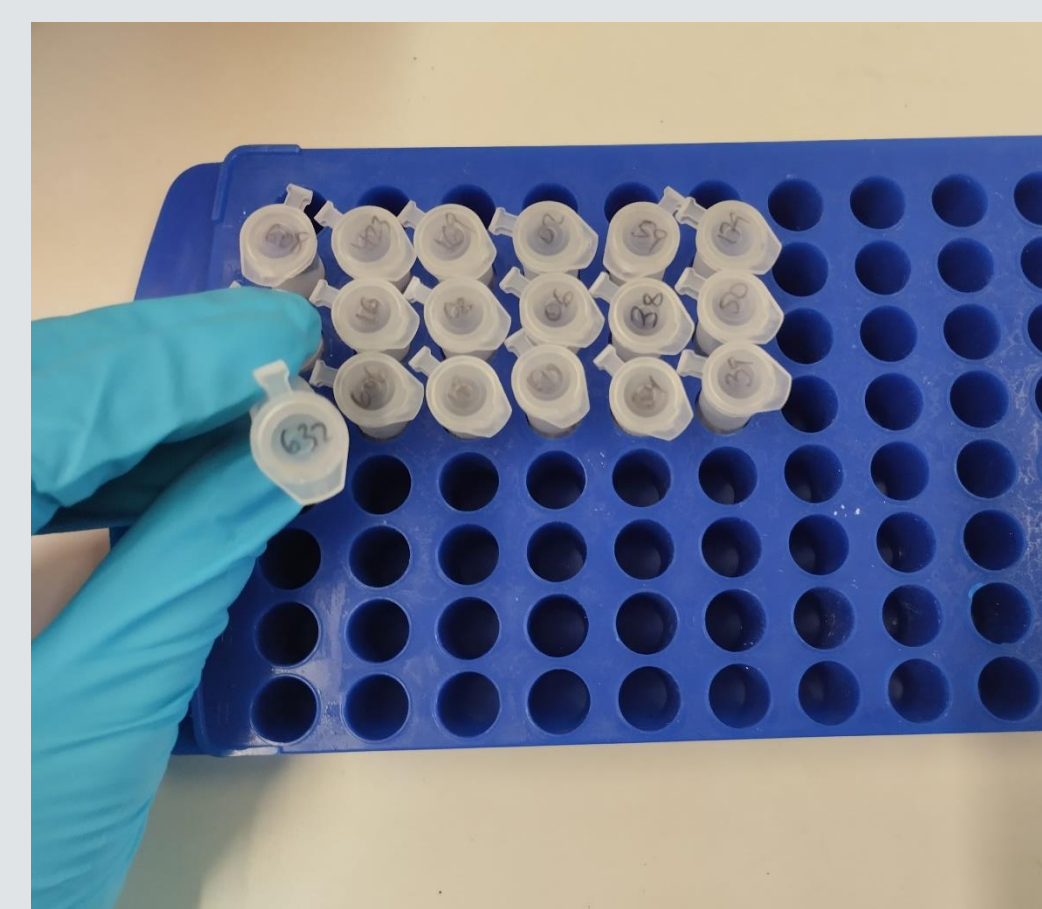
- Public, free of charge
- Safe (annual fee applied)

### Strain distribution

- Non-profit and profit organizations
- For basic and applied research

### Morphological analysis

- Isolated strains
- Environmental samples



### Molecular analysis

- Extraction of genomic DNA
- Amplification of conserved taxonomic markers (16S rRNA, ITS, etc)
- Detection of genes for toxin production
- Tailor-made analyses

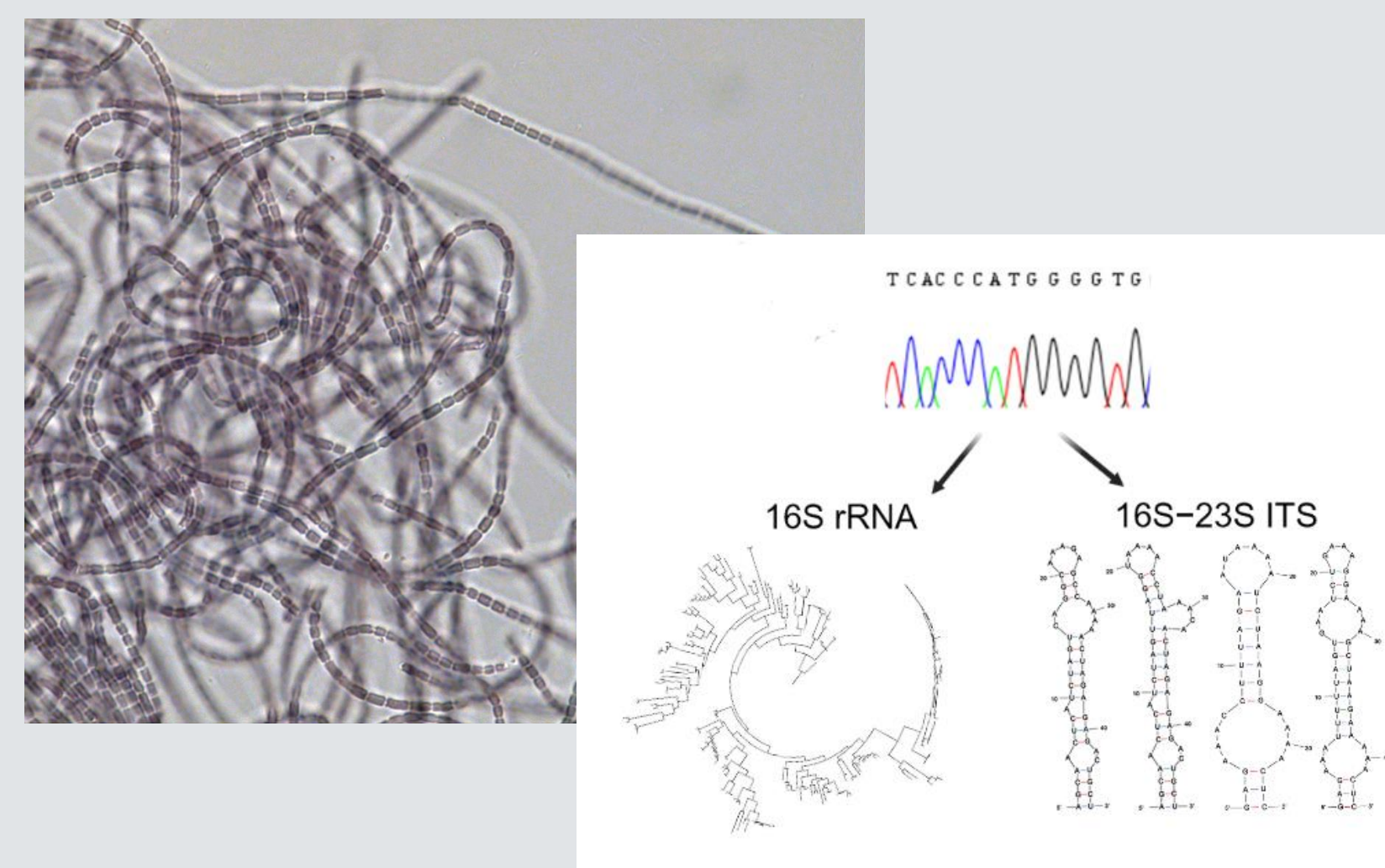
### Bioinformatics

- Genome assembly
- Phylogenomics/phylogenetics
- Genome mining for new bioactive metabolites

## TRAININGS OFFERED AT BCCM/ULC



Handling & preservation  
of Cyanobacteria



Isolation and characterization of  
Cyanobacteria using a polyphasic approach



Basic Bioinformatics,  
Nextflow & Apptainer usage and  
GEN-ERA Workflow (Cornet *et al.* 2023)

## EXAMPLES OF CYANOBACTERIAL REFERENCE STRAINS DEPOSITED AT BCCM/ULC



*Johannesbaptistia  
flridana* ULC590<sup>T</sup>  
(Berthold *et al.* 2020)



*Plectolyngbya  
hodgsonii* ULC009<sup>T</sup>  
(Taton *et al.* 2011)



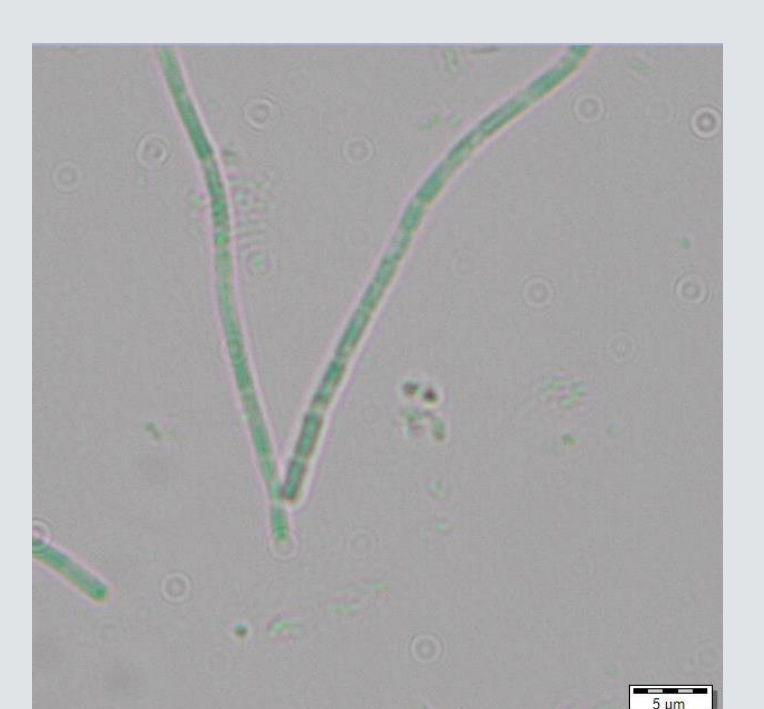
*Timaviella  
circinata* ULC401<sup>T</sup>  
(Sciuto *et al.* 2017)



*Parakomarekiella  
sesnandensis* ULC591<sup>T</sup>  
(Soares *et al.* 2020)



*Brasilonema  
fioreae* ULC548<sup>T</sup>  
(Barbosa *et al.* 2021)



*Shackletoniella  
antarctica* ULC037<sup>T</sup>  
(Strunecky *et al.* 2019)

## CONTACT INFO

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<https://bccm.belspo.be/about-us/bccm-ulc>

## REFERENCES

Barbosa *et al.* (2021) *Fottea* 21:82–99.  
Berthold *et al.* (2020) *Fottea* 20:152–9  
Cornet *et al.* (2023) *GigaScience*: giad022  
Sciuto *et al.* (2017) *Cryptogam Algal.* 38:285–323  
Soares *et al.* (2020) *Eur J Phycol* 27:1–15  
Strunecky *et al.* (2019) *FEMS Microbiol Ecol.* 96: fiz189  
Taton *et al.* (2011) *Polar Biol.* 34:181–91