

Sunday 25th September:

Participant arrival and informal meeting for dinner.

Monday 26th September:

9.00-10.30: **Opening and *THEME 1 – Diversity and molecular phylogenetics of *Trebouxia* in lichens***

9.00-9.15: **Opening.** Lucia Muggia

9.15-9.45: **About the lifestyle of *Trebouxia* algae.** Ondrej Peksa , Tereza Řídká, Lucie Vančurová, Zuzana Vaiglová Z, Pavel Škaloud

9.45-10.15: **Lichen photobionts at high elevations of the hyperarid Atacama Desert.** Sergio Pérez-Ortega, Carmen Ascaso, Octavio Artieda, Jacek Wierzchos

10.15-10.45: **Biodiversity and distribution in Austral *Trebouxia* taxa focused on Patagonia and Antarctica.** Ulrike Ruprecht

[10.45-11.15: coffee break](#)

11.15-11.45: **Assessing diversity and patterns of association in *Trebouxia*.** Matthew P. Nelsen

11.45-12.15: **Inferring a phylogenetic hypothesis for *Trebouxia* to better characterize diversity in this important photobiont genus.** Leavitt Steven

12.15-12.45: **Photobiont Diversity.org: genetic diversity of lichen photobionts and related organisms.** Heath O' Brien

[12.45-13.45: lunch break](#)

13.45-16.15: ***THEME 2 – Species delimitation and association patterns in *Trebouxia****

13.45-14.15: **Assessing species boundaries in the lichen photobiont *Trebouxia*.** Anna Sadowska-Deś, Francesco Dal Grande, Thorsten H. Lumbsch, Andreas Beck, Imke Schmitt

14.15-14.45: **ITS2 secondary structure and morpho-genetic groups of species in the genus *Trebouxia*.** Andreas Beck

14.45-15.15 **Identification, association and coevolutionary patterns of the photobionts associated with *Protoparmelia* s.str.** Garima Singh, Francesco Dal Grande, Pradeep K Divakar, Jürgen Otte, Ana Crespo, Imke Schmitt

15.15-15.45: **Interdisciplinary approaches to assess diversity and coexistence in Trebouxiophyceae: ultrastructural, genomic, molecular and functional analyses.** Eva Barreno and the “Lichen Symbiogenesis team”

15.45-16.15: **Patterns in photobiont association in *Cetraria aculeata*.** Fernando Fernandez-Mendoza

[16.15-16.45: coffee break](#)

16.45-19.00: ***THEME 3 – Physiology and cell biology of cultured *Trebouxia* and *Asterochloris****

16.45-17.15: **Trebouxiophyceae: a cell biology perspective.** Myriam Catalá, Eva Barreno

17.15-17.45: **About the role of Plant hormones in *Trebouxia*: data and hypothesis.** Pedro Carrasco, Ernesto Hinojosa-Vidal, Francisco Marco, Fernando Martínez-Alberola, Eva Barreno

17.45-18.15: **How does *Trebouxia* prepare for anabiosis? A metabolic approach to desiccation tolerance.** Andres Sadowsky

18.15-18.45: **Tolerance to abiotic stress in *Trebouxia* and *Asterochloris* lichen microalgae: physiological standpoints.** Francisco Gasulla, Pedro Carrasco, Eva Barreno

Remaining available time for general discussion.

[20.00: Dinner \(typical Trieste restaurant\)](#)

Tuesday 27th September:

9.00-13.00: **THEME 4 – Genomic and NGS approaches to study *Trebouxia* diversity**

9.00-9.30: **Transcriptomic analysis of the lichen photobiont *Trebouxia gelatinosa* subjected to dehydration and rehydration processes.** Alice Montagner, Fabio Candotto Carniel, Marco Gerdol, Elisa Banchi, Chiara Manfrin, Lucia Muggia, Alberto Pallavicini, Mauro Tretiach

9.30-10.00: **Microalgal diversity inside a single lichen thallus revealed by HGS approaches (454 amplicon pyrosequencing assay).** Patricia Moya, Arantxa Molins, Fernando Martínez-Alberola, Eva Barreno

10.00-10.30: **Exploring the possibility of multiple *Trebouxia* lineages in individual lichen thalli using next-generation sequencing.** Leavitt Steven

[10.30-11.00: coffee break](#)

11.30-11.30: **Altitude and host genetic identity shape the algal microbiome of congeneric hosts: a metabarcoding approach.** Francesco Dal Grande, Miklós Bálint, Pradeep K Divakar, Jürgen Otte, Ana Crespo, Imke Schmitt

11.30-13.00: **THEME 5 – Morphological and phylogenetic species delimitation in *Trebouxia***

11.30-12.00: **Morpho-genetic groups of species in the genus *Trebouxia*.** Anna Voytsekhovich, Andreas Beck

12.00-12.30: **Species delimitation in *Asterochloris*, a close relative to the genus *Trebouxia*.** Pavel Škaloud, Ondrej Peksa, Jana Steinová, Tereza Řídka, Lucie Vančurová, Jiří Malíček

12.30-13.00: **Time for general discussion.**

[13.00-14.00: lunch break](#)

14.00-18.00 h: **THEME 6 - Practical session:** analyses of cultures. Andreas Beck, Pavel Škaloud and Lucia Muggia will provide some cultured strain for microscopy observation. Discussion and exchange of expertise of photobiont isolation and culture approaches will be the focus of this session. Everyone who wish to share their own strain for microscopy analyses is welcome to bring them.

[16.00-16.30: coffee break](#)

16.30-18.00 h: **THEME 6 - Practical session:** analyses of cultures – Continue.

18.00-18.30: **Time for general discussion.**

[19.30/20.00 h: Dinner \(typical Trieste restaurant Scarpon\)](#)

Wednesday 28th September:

9.00-10.30: **THEME 7 – Isolation and *in vitro* cultures of trebouxioid microalgae as crucial pieces for species delimitation**

9.00-09.30: **Trouble with *Trebouxia*? Culture experiments and progress in understanding the nutrient requirements of major symbiotic algae.** Elfie Stocker-Wörgötter

9.30-10.00: **Improved propagation method, rapid molecular identification and ultrastructural characterization as a multidisciplinary approach for *Trebouxia* species delimitation.** Patricia Moya, Salvador Chiva, Arantxa Molins, Francisco García-Breijo, José Reig-Armiñana, Eva Barreno

10.00-10.30: **Presentation of the website “symbioticgreenalage.com”.** Lucia Muggia, Eva Barreno

[10.30-11.00 h: coffee break](#)

11.00-12.30: **Schematic summary of the sessions, general discussion, project initiatives and conclusions**

Summarizing contributions by Lucia Muggia, Eva Barreno.

General discussion with open contributions from anybody else.

Outlooks for future, international project funding: Pedro Carrasco (Cost initiative and other European funding) and open contributions from anybody else.

[12.30-14.00: lunch break](#)