

Workplaces in the:

## FIELD SCHOOL

*Microbialites of the Puna: the study and interpretation of organo-sedimentary facies in the stratigraphic record and modern analogues*



# Ojos de mar (microbial biostromes)



# Laguna Carachipampa (stromatolytic platforms and oncolites structures)



## Las Quínoas (oncolites structures)



## Laguna Verde (evaporitics)



**Pozo Bravo (domic and platform microbialites)**



**Ojo Bravo (microbial biostromes)**



# Yacoraite Formation (Maastrichtian fossil stromatolites)



## TEMARY

### MODULE 1: CABINET WORK

- Unit I: Definition of microbialite. Identification of organo-sedimentary facies. Classification of microbialites. The "boom" of its importance in science.
- Unit II: Introduction to geomicrobiology. Applications. Microbial degradation of hydrocarbons. History of the Earth and astrobiology. Minerals precipitated microbially. Extremophiles.
- Unit III: The architecture of microbialites in a deposit. External morphology: paleoenvironmental classifications and implications. Stromatolytic facies as guide horizons. Examples in the geological record. Palaeoenvironmental reconstructions.
- Unit IV: Microbialites as biological components of relevance in the wetlands and salt flats of the Puna. Monitoring and environmental surveys in the context of lithium mining. Legal implications.

### MODULE 2: FIELD WORK

- Unit I: Carachipampa volcano and Laguna Carachipampa (hydrothermal sources of sulfur, stromatolytic platforms and oncolites structures).
- Unit II: Salt of Antofalla: Pozo Bravo (domic and platform microbialites), Ojo Bravo (microbial biostromes), Las Quínoas (oncolites structures) and Laguna Verde (evaporitics).
- Unit III: Tolar Grande: Ojos de mar (microbial biostromes).
- Unit IV: Maimará: Yacoraite Formation (fossil stromatolites of the Maastrichtian-Danian).

### MODULE 3: WORK IN THE LABORATORY

- Unit I: Internal morphology: classifications and paleoenvironmental implications. Macrofábrica. Microfabrica and mineralogy. The relationship between cyanobacteria and the morphology of a microbialite.

## PRICES

- Companys US\$ 2700
- Proffesors and university students US\$ 1800