

Case Study Atacama Desert

Project Topic: Limits of life and astrobiology

Project Partner: GFZ Deutsches Geoforschungszentrum Potsdam, TU Berlin

Location: Atacama Desert, Chile

Sample type: Desert soil

Target Molecule:

Intracellular and extracellular DNA

Laboratory Analysis:

qPCR and 16S rRNA Amplicon Sequencing

Bioinformatic Analysis:

Community composition and diversity

Indicator species analysis

Correlation with environmental factors

Summary:

Evaluating the extracellular and intracellular DNA fractions in soil and rock samples from different Atacama desert locations, it was possible to identify highly adapted microbial species, investigate their response to extreme aridity and UV exposure, and gather important insights on microbial turnover in Mars like environments.

More details: <https://www.mdpi.com/2076-2607/9/5/1038>

