SPACE LIFE SCIENCES SYMPOSIUM (A1)
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# MASE - MARS ANALOGUE FOR SPACE EXPLORATION PROJECT

**Abstract**

MASE is a collaborative, four-year research project supported by the European Commission seventh framework programme (FP7).

This project started in January 2014 and its main objectives are to perform experimental studies to investigate how selected anaerobic microorganisms collected from Mars analogue sites on Earth respond to stress. In particular, combinations of stress, such as high radiation conditions combined with high salt and low temperature, will be investigated. MASE intends to:

-Isolate and characterise anaerobic microorganisms from selected sites that closely match environmental conditions that might have been habitable on early Mars.

- Study their responses to realistic combined environmental stresses that might have been experienced in habitable environments on Mars.

- Investigate their potential for preservation and fossilisation on Mars by carrying out a systematic study of the detectability of artificially-fossilised organisms exposed to known stresses.

The project will also consider transversal issues such as methodologies for sample management as well as for life detection. The MASE project will improve our knowledge of the adaptation of life to the kinds of extreme conditions of habitability on Mars. It will also present opportunities to optimise mission operations and life detection.

Throughout its lifetime, MASE intends to develop a network of associated members who would beneefitt from the innovative approach of the project and the momentum it will create.

MASE project partners are: University of Edinburgh, UK Centre for Astrobiology, DLR, Autonomous university of Madrid, MATIS ltd, University of Leiden, INTA- Centro de Astrobiologia, University of Regensburg, CNRS-Orléans, NERC British Antarctic Survey, European Astrobiology Network Association (EANA), European Science Foundation