

Lukáš Mikša

| Ph: +420 773 713 684 | Email: lucas.miksa@gmail.com |



Research Experience

Laboratory of Space Agri Technologies

Department of chemistry and biochemistry, Mendel University in Brno
Research assistant

Brno, CZ

July 2021 – Sep 2023

- Took a part in an international stratospheric interdisciplinary experimental project (Projekt Společně mezi zemí a vesmírem) and later on gave a presentation at a workshop about own experiments onboard the stratospheric probes.
- Presented own research about the potential use of manganese and zinc complexes in space agriculture at a conference Development of Ground Segment for the Support of Space Missions 2021, Czechia
- Presented own research about the longterm effects of chronic irradiation by ionizing radiation on microalgae at conference Modern Chemical Physics: From the Universe to the Microcosmos 2022, Czechia
- Presented a poster at the conference for marine biologists YOUMARES13 in Berlin, Germany
- Experienced in the cultivation of microalgae and cyanobacteria in e-flask and bioreactor environments, and their stress assessment by methods of biochemical and molecular biology analysis also have experience with the cultivation of Basidiomycota mycelium
- Capable of operating imaging flow cytometer.
- My undergraduate research focused on microalgae and their physiological and molecular response to chronic exposure to ionizing radiation in doses representing the real radiation hazard on our Moon, Earth's low orbit, or Mars.

Department of Geological Sciences

Brno, CZ

Student' s Professional Activities (SPA) competitor

September 2018 - 2020

- Measured radioactivity of rock samples and the activity of radon gas at various locations.
- Worked with scanning electron microscope (SEM) and SX100 Electron Microprobe.
- Placed in a national round with SPA research project.

ZARM – Center of Applied Space Technology and Microgravity

Bremen, ENG

Internship – cultivation of *Anabaena* on Martian regolith simulant

March 2024 - May 2024

- Cultivation of *Anabaena* on MGS-1, and in medium containing perchlorates.

- Epifluorescence microscopy, scanning electron microscope (SEM), transmission electron microscopy (TEM)
- Presented my research as a poster at It MA(t)TER(s) Conference 2024.

University of the Ryukyus Tropical Biosphere Research Center Sasei Okinawa, ENG

Field trip – Large Benthic *Foraminifera* (LBF) and hydrogen peroxide 6 Sep 2024 – 22 Sep 2024

- Collection of LBF from the field, incubation experiments with LBF, hydrogen peroxide determination by enzymatic assays.
- Microsensor work, measuring in the field, *in situ* and *ex situ*

Education

The Higher School of Chemistry Brno, CZ
Science-Specialized Lycée, graduated with honors, June 2020

The Faculty of AgriSciences Mendel University in Brno Brno, CZ
Molecular biology and biotechnology, graduated, June 2023

Max Planck Institute for Marine Microbiology, University of Bremen, Bremen, ENG
Marine microbiology (MarMic), since September 2023

Skills

- basic data analysis in Jupyter Notebook (Python), data analysis in IDEAS (imaging flow cytometry), basics of microsensor work, MS Office
- Languages: fluent in English (Cambridge C1/C2 certificate), Czech, Slovak, and A1 in German

Declaration

I hereby declare that all the information provided in this CV is true and accurate to the best of my knowledge.

Marburg, 4 October 2024