Kateřina Sulková

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Education

2022–present **Heidelberg University** [website] and **German Cancer Research Center (DKFZ)** [website]
I'm getting a Master's in Molecular Biosciences with a major in Cancer Biology.

2019–2022 **University of Chemistry and Technology** [website]
I got my bachelor's degree in Biochemistry and Biotechnology with specialization in Biochemistry and Microbiology.

2021–2022 **Charles University** [website]
I studied Computer Science for two semesters (Bachelor's programme). Although I decided to prioritize my studies in Heidelberg, I learned the basics of coding and problem-solving in this programme, which I am using in my studies and research.

Recent research projects

2021–present **Reactive oxygen species visualization using NMR**
– Institute for Clinical and Experimental Medicine, Group of Experimental Magnetic Rezonance (Czech Republic)
– developing cell culture model of hypoxia in emerging tumors or inflammation
– anti-inflammatory activity tests *in vitro*
– MR spectroscopy *in vitro* and *in vivo*
⋆ ongoing, first results presented at the "European Molecular Imaging Meeting 2022" and "Czech-Austrian Workshop on Magnetic Resonance Imaging and Spectroscopy 2022"

2021–2022 **Sensitivity of collection cell lines to chemotherapeutics**
– University of Chemistry and Technology in Prague, Department of Biochemistry and Microbiology (Czech Republic)
– testing the cytotoxicity of 13 anticancer agents with different mechanisms of action and resistance to frequently used cell lines, creating a panel of known IC_{50}s that can be used as a comparison to the effect of tested new compounds
⋆ bachelor thesis

2021 **Langerhans islets labeling with novel MR contrast agent**
– Institute for Clinical and Experimental Medicine, Group of Experimental Magnetic Rezonance (Czech Republic)
– islets labeling and gelatine phantom preparation
– MRI measirememts *in vitro* (phantom solutions), *ex vivo* (isolated pancreatic islets), *in vivo* (mouse)
⋆ results published in ACS Applied Materials & Interfaces [link]

2020–2021 **Tumor volumetry measurements**
– Institute for Clinical and Experimental Medicine, Group of Experimental Magnetic Rezonance (Czech Republic)
– comparison of tumor-volume-measuring methods (MRI, calipers)
– volume measurements to determinate efficiency of anticancer agent
– transfection of cell line (transposon system)
⋆ results in revision