

Linz, 4th September 2023

Comments of the supervisor on the student and the thesis

Mrs. ATTAR focused on investigating structures of the channel protein Orai1. Together with STIM1, this protein builds the CRAC channel, known to play a crucial role in various common diseases like allergies. By the use for bioinformatical analysis, her specific task was to confirm a possible structural rearrangement in constitutively open Orai1 channels and an alteration upon the induction of a H134A mutation. The target is to shed further light on a putative functional impact of these structures on the channel's gating and selectivity mechanisms, leading to future therapeutic strategies for treating CRAC dependent diseases.

During her bachelor thesis, Mrs. ATTAR was working with various techniques like:

- Methods in molecular analysis (PCR, gelelectrophoresis, DNA preparation, cloning, sequencing)
- Biochemical analysis methods (protein expression, protein purification, cysteine-crosslinking, PAGE, Western-blot, immunodetection)
- Bioinformatical Analysis and evaluation of data using PYMOL

Mrs. ATTAR was carrying out her tasks to our satisfaction. She proved as a dedicated and reliable colleague, who is engaged in her research goals. Her mode of operation is careful and diligent. Within her time at our institute she has acquired expertise in the field of calcium signalling, comprising molecular biology and biochemical techniques. During all time, she was appreciated by her supervisors and colleagues, her personal manner was always correct.

The obtained thesis is well structured and gives insights into structural rearrangements taking place during channel opening and closing.

Mrs. ATTAR is motivated in gaining further expertise in research. I am convinced of her capability and dedication to engage in research tasks and give her my recommendation.


Christoph Romanin