



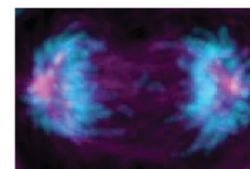
LUDWIG-
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UNIVERSITÄT
MÜNCHEN

BIOMEDICAL CENTER MUNICH
BIOMEDIZINISCHES CENTRUM MÜNCHEN



Master thesis

(Beginning autumn 2023, flexible date)



LMU Biomedical Center (BMC)

Physiological Chemistry (Department of AG Ladurner)

Group of Dr. Magdalena Murawska

Mitotic chromatin regulation by histone chaperones

Background

Accurate chromosome segregation is essential for genome integrity and chromosome segregation errors are hallmarks of cancer. A centromere is a region of specialized chromatin that organizes a large network of proteins called kinetochore which generates attachment sites of duplicated chromosomes and spindle microtubules during cell division. Hence, accurate chromosome segregation requires orchestrated and spatial action of structural proteins, signaling pathways as well as dedicated centromeric chromatin factors.

What will you be working on?

We have recently identified novel functions in mitosis of a highly conserved histone chaperone in a model organism, fission yeast. We also predicted two putative interaction partners using AlphaFold. The goal of this project is to validate those interactions using state of the art biochemistry approaches. Further, we would like to systematically screen for the novel interaction partners of this chaperone using mass spectrometry supported by AlphaFold protein-protein interaction predictions.

Techniques you will be using:

- Recombinant protein purification methods
- Pulldowns and Co-IPs
- Various biophysical approaches (ITC/MST, nanoDSF)
- Mass spectrometry
- AlphaFold

Who are we looking for:

We look for a science driven, curious and dedicated master student. An experience with protein work and/or data analysis is welcome.

Contact:

If interested, please send me your letter of motivation, a copy of your academic transcripts and at least one email contact for references from your previous supervisor(s) with an email to: magdalena.murawska@bmc.med.lmu.de

For more information visit:

<https://www.physiolchemie.abi.med.uni-muenchen.de/research/murawska/index.html>