LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

BIOMEDICAL CENTER MUNICH
BIOMEDIZINISCHES CENTRUM MÜNCHEN

Master thesis

(Beginning spring or summer 2023)

LMU Biomedical Center
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 two highly conserved histone chaperones in a model organism, fission yeast. The goal of this project is to establish molecular function(s) of those factors at centromeres and during chromosome segregation and to unveil mechanisms that drive their cell-cycle regulated chromatin recruitment.

Techniques you will be using:

- Confocal microscopy and live-cell imaging
- ChIP-QPCR
- CRISPR/Cas9
- Chemical genetic strategies for cell cycle manipulation

Who are we looking for:

We look for a science driven, curious and dedicated master student. An experience with microscopy 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