

Masterthesis in the Institute of Molecular Cell Biology – WWU Münster

We are looking for a Master's student interested in writing his/her dissertation about the project

Quantitative Analysis of GLUT4 Membrane Clustering in Cardiomyocytes

The project is a collaboration between the Cellular Bioenergetics group (AG Busch) and the Quantitative Cell Biology group (AG Grashoff) within the Institute of Molecular Cell Biology at the WWU Münster. We are also collaborating with the Gould laboratory at the University of Strathclyde Glasgow, Scotland, and we offer the opportunity to carry out part of the work there.

Specifically, we want to investigate the clustering of the glucose transporter GLUT4 in iPSC derived cardiomyocytes, using single molecule localization microscopy (SMLM, DNA-PAINT). This will involve characterization of the cell line via qPCR, western blotting and seahorse analyser assays, followed by the design of plasmids and subsequent genetic manipulation of the cell line, which will then allow us to visualise and analyze GLUT4 in classic Laser Scanning Microscopy (LSM) and SMLM.

The work mainly comprises

- Cell culture
- Microscopy
- Classical molecular biology techniques

Experience in one or more of these areas is beneficial but not a requirement.

The duration of the project is 9-12 months, starting between October 2020 and January 2021 (this is flexible). Unfortunately, we cannot offer remuneration.

If you would like to apply, please send your application with CV and relevant transcripts or references to Dr Silke Morris. If you need any more information before applying, feel free to get in touch.

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