



Master Thesis in Biochemistry



Who are we?

Our group, located at the Braunschweig Integrated Centre of Systemsbiology (BRICS), is interested in the role of metabolism during inflammation. This includes macrophage metabolism during infection but on the other hand also the role of microglia cells during neuro-degeneration as well as neuronal metabolism in general.

The team has developed a strong expertise in stable-isotope assisted metabolomics and metabolic flux analysis both on a whole cell as well as on a mitochondrial sub-compartment level.

Project background

Parkinson's Disease (PD) is the second most common neurodegenerative disease after Alzheimer's Disease. Approximately 5 – 10 % of the diagnoses are linked to a genetic background. A few of these genes like PINK1 and Parkin are coupled to mitophagy.

Our collaborators in Lübeck established fibroblast cell lines generated from PD patients. We are interested in the central carbon metabolism, mitochondria function and amino acid metabolism in these cell lines.

Our preliminary data were quite promising and a lot of interesting research questions arised.

Thesis content – utilized methods

- Primary cell cultivation
- different biochemical assays
- GC-MS
- HPLC

Interested?

Contact:

Philipp Hörmann
p.hoermann@tu-bs.de

Prof. Dr. Karsten Hiller
karsten.hiller@tu-bs.de