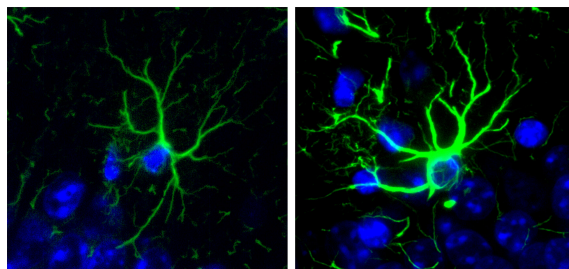


The **Department of Cellular and Molecular Pathology, DKFZ Heidelberg** (Prof. Dr. H.-J. Gröne) is seeking two exceptionally motivated and skilled students (m/f) for a

Master Theses in Neurobiology (two positions)

The Role of Astrocytic Gangliosides in Obesity, Neuroinflammation and Alzheimer's Disease

The project is funded by the Deutsche Forschungsgemeinschaft (DFG)



The following master projects in neurobiology offer the possibility to investigate the regulatory membrane **lipid microenvironment of Astrocytes** in the fascinating field of **obesity, neuroinflammation and Alzheimer's disease (AD)**.

Gangliosides are highly expressed components of neuronal and glial plasma membranes, which are essential for brain maturation and signal transduction. Neuronal ganglioside depletion has been associated with obesity and amelioration of neurodegeneration in AD (*Nordström et al., 2013, PLoS Biology; Herzer et al., 2016, Acta Neuropathol. Comm.*). Whether glial cell gangliosides may constitute a molecular link between nutrition, obesity, neuroinflammation, and subsequent neurodegeneration is still elusive.

Therefore, the aims of these projects are to **elucidate the role of astrocytic gangliosides** in:

- 1) high-fat diet induced neuroinflammation and**
- 2) in cellular/animal models of Alzheimer's Disease.**

Potential molecular mechanisms shall be investigated in a combined approach using primary cell culture systems and mouse models.

The successful applicant has an excellent theoretical background and interest in neurobiology. S/He has very good hands-on skills in basic lab techniques and is highly motivated to work efficiently in our team of young scientists. **An extensive practical lab training is intended to precede the master project.**

Start of the projects: As soon as possible

Application: Please send a short motivation letter (English) as well as your CV to **Dr. Silke Herzer (s.herzer@dkfz.de)** or **Dr. Viola Nordström (v.nordstroem@dkfz.de)**.