

## **Marlen Knobloch – abstract**

### The role of lipid droplets in the healthy and aging brain

Lipid droplets (LDs) are the fat storing organelles of cells, best known in adipocytes. All cells can in principle form LDs, but their presence in cells not directly involved in lipid homeostasis has so far mainly be associated with metabolic disturbances or disease. We could recently show that LDs play an important physiological role for neural stem cells (Ramosaj Madsen et al. Nat. Commun 2021). To study LDs in vivo, we have developed a novel endogenous fluorescent LD reporter mouse, allowing the staining free visualisation of LDs in living and fixed cells and tissue. Using this novel mouse model, we could demonstrate that LDs are numerous in various cells of the healthy developing and adult brain (Madsen et al. bioRxiv 2022). These findings have opened up many new questions to address in a PhD project and I'm happy to discuss these with interested candidates.