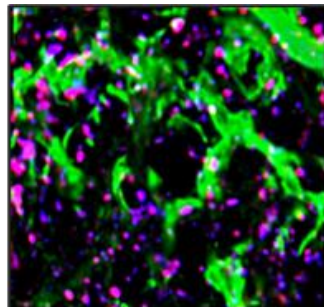
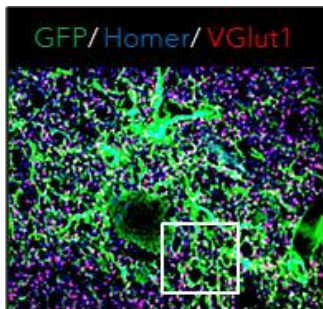




PhD position available starting March, 1<sup>st</sup> 2023

Project: “Astrocyte-mediated synaptic phagocytosis in emotional and social dysfunctions”

Astrocytes control several aspects of synaptic formation, elimination (pruning) and function. Major Depressive Disorder (MDD) is a complex psychiatric illness, which displays disrupted synaptic communication and neuronal connectivity, thus suggesting a putative role for astrocyte-synapse interactions in its pathogenesis. Aim of this project is to identify the intracellular and intercellular molecular pathways impaired in the astrocyte-mediated synaptic phagocytosis/pruning in emotional and social dysfunctions. To reach this goal, we apply pharmacogenetic manipulations of target genes of interest in brain-derived-rat astrocytes/neurons and organoid-derived-human astrocytes, stereotactic surgery, AAV-mediated RNA interference *in vitro* and *in vivo*, pharmacological treatments combined with behavioral studies and histological methods (immunofluorescent-histochemistry, western blots, qPCR, in situ hybridization, IMARIS-mediated examinations of astrocyte morphological changes, expansion microscopy, confocal microscopy) on rat and human tissues.



Astrocytes (green) contact glutamatergic synapses (blue, red) through their processes

**Start of funding on March, 1<sup>st</sup> 2023.** The position is funded for up to three years, according to the German pay scale TV-L E13 (65%). The project is part of the DFG graduate program “Neurobiology of Social and Emotional Dysfunctions” GRK 2174 (<https://www.uni-regensburg.de/research/grk-emotion/grk-home/index.html>).

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<https://www.uni-regensburg.de/medizin/psychiatrie-psychotherapie/forschung/molekulare-neuroplastizitaet/index.html>