



PhD position available

Project: “Identification of adolescents at high versus low risk for anxiety and depressive disorders using neuroendocrine and imaging connectome markers”

The main period for manifestation of anxiety and depressive disorders emerges in the transition from childhood to adolescence and during adolescence, i.e. during a time characterized by remodeling of functional and structural connectivity between associated cortical and subcortical brain areas. Based on striking gender differences in the prevalence of anxiety and depressive disorders the role of gonadal hormones on brain morphometric changes have been shown. However, the role of neuropeptides, such as OXT, as modulators of synaptic plasticity in abnormal neuroanatomical maturity is unknown. It is still unknown whether a stress-induced release of endogenous OXT may alter the functional connectivity in fronto-limbic networks. Our aim is to investigate the association between stress-induced neuropeptides (OXT) and neurosteroids (CORT) and resting state functional connectivity between amygdala and emotional control networks in adolescents with anxiety disorders and depressive disorders compared to healthy controls 11-19 years of age. Specifically, neuronal circuits of emotion regulation will be studied using graph-based connectome models combining functional and structural MRI data (structure-function coupling) in association with neuroendocrine stress markers (saliva cortisol and OXT).

Start of funding on April 1st, 2023. 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/kinder-jugendpsychiatrie/forschung/index.html>