

Sarah Ayash, LIR Mainz

<https://lir-mainz.de/en/forschungsgruppe/ag-mueller>



Dr. Sarah Ayash is a postdoc at Leibniz Institute for Resilience Research – LIR and investigates stress resilience. Her research goal is to establish ecologically valid translationally relevant mouse models of stress resilience. Using: behavioural testings, fear conditioning/extinction, hormonal analysis, transcriptome analysis, fMRI, DTI, pharmacological manipulations, fibre photometry, and optogenetics. She has developed a behavioural model yielding resilient and susceptible subgroups in a cohort of socially defeated mice. Inspired by her work on the stress inoculation mouse model, she has established an extinction training design of social aversive memories. In her current position, using the developed behavioural model, she investigates anatomical (MRI) and brain connectivity (DTI) biomarkers of stress resilience, employs pharmacological manipulations of dopaminergic circuits to reverse stress susceptibility-associated symptoms, harnesses cutting edge technology of modern circuit neuroscience to understand the involvement of the mesolimbic circuit in stress resilience, and puts forward a comprehensive assessment of reversal learning while conducting fMRI in awake mice, affording brain wide identification of stress resilience/susceptibility-related network state transitions.