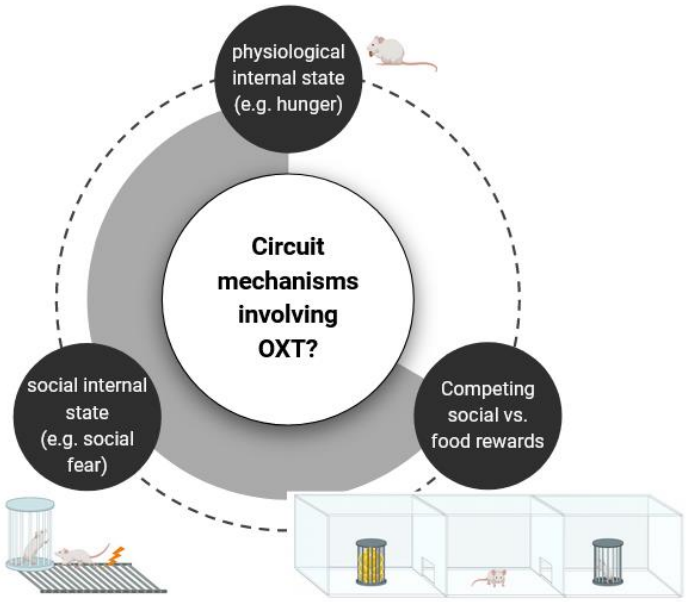
PhD position available

Project title: "Choosing between competing rewards: modulation by social stressors in rodents"

Rewards are appetitive, incentive stimuli triggering positive outcomes of motivated behaviour. They can serve as reinforcers, increasing the behaviour occurrence or its strength in the future. Animals integrate different rewarding stimuli from the surrounding environment, including interactions with conspecifics. In this scenario, numerous stimuli may be present simultaneously, and animals must adapt their behavioural responses according to the environmental context, internal states and experiences. This behavioural adaptability is critical for survival. For example, animals are often faced with the challenge of finding food while concurrently avoiding dangerous situations. If a predator's scent is detected, an animal might choose to hide. However, if it is hungry enough, it may prioritize finding food over staying hidden.



So far, little is known about the behavioural responses during competing drive states and the neurobiological mechanisms that underlie the adaptive prioritization of behaviours.

In this regard, the PhD student will study the impact of social stressors on competing reward-related behaviours (e.g. social vs. food reward) in mice.
At the behavioural level, he/she will combine social fear conditioning and food preference paradigms to study the impact of internal states (i.e., social stressors, hunger) on the choice of competing rewards. At the molecular level, he/she will investigate the role of the oxytocinergic (OXT) system in regulating the prioritization of behaviours.

Strategies to disentangle the underlying neural circuits controlling the choice of competing rewards will involve using various molecular techniques (e.g., qRT-PCR, western blotting, RNA scope, immunohistochemistry) as well as pharmacological, viral and genetic tools.

Start of funding: May 2023
The position is funded for at least 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.

Deadline: 10 March 2023

For application details, please see our webpage:

https://www.uni-regensburg.de/research/grk-emotion/grk-home/index.html

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