MANCHESTER NEUROSCIENCE SEMINAR SERIES

FROM THE UNIVERSITY OF MANCHESTER

ABIGAIL PIENAAR

Abigail is a Postdoc in the Allen Lab

This Seminar will be hosted by Dr Nina Milosavljevic

TITLE: CIRCADIAN MODULATION OF VISUAL PROCESSING WITHIN THE VISUAL THALAMUS

Circadian clocks are a ubiquitous feature of life on Earth, allowing organisms to anticipate daily changes in the environment and optimize their physiology accordingly. One of the most dramatic yet predictable changes accompanying the transition from day to night is the change in the visual environment, which varies hugely in both spectral composition and intensity across the day. Circadian clocks drive rhythmic modulation in many aspects of retinal physiology, leading to changes in the visual code depending on the time of day. However, it remains unclear how the circadian system might modulate visual processing downstream from the retina, within the visual thalamus. To investigate this problem, we performed a series of electrophysiological recordings of the visual thalamus in both awake and anaesthetized mice, and employed optogenetic techniques to further interrogate this synapse. In this seminar I will present data which demonstrates that spontaneous neural activity of the visual thalamus may be under circadian control, and further indicates there may be diurnal modulation of visual processing within the visual thalamus.

30•OCT•2024 | 14:00 - 15:00

Michael Smith Lecture Theatre

in conjunction with Amy Worth

EVERYONE WELCOME

MANCHESTER NEUROSCIENCE SEMINAR SERIES

FROM THE UNIVERSITY OF MANCHESTER

AMY WORTH

Amy is a Postdoc in the Luckman Lab

This Seminar will be hosted by Dr Nina Milosavljevic

TITLE: CENTRAL CIRCUITS REGULATING FOOD INTAKE

The brain is the master orchestrator of appetite, with both the brainstem and hypothalamus serving as key “hubs” in the control of feeding. The brainstem is comprised of multiple neuron populations that are activated by discrete gut-derived signals and that can reduce food intake when stimulated. In contrast, the major hunger-promoting neurons, located in the hypothalamus, are inhibited by anorectic signals, potentially via neural pathways that relay through the brainstem. In this talk, I will explain how we have used chemogenetic, optogenetic and fibre photometry techniques to map brain circuits that reduce food intake in different contexts, without affecting hunger per se. This expands our understanding of the central circuits that regulate eating behaviour, including those that are emerging as targets for the next generation of anti-obesity therapeutics.

30•OCT•2024 | 14:00 - 15:00

Michael Smith Lecture Theatre

in conjunction with Abigail Pienaar

EVERYONE WELCOME