

## **Symposium 1: Neural networks of fear and anxiety**

**Theme: Attention, motivation, behaviour**

**Monday 10<sup>th</sup> April, 13:00 – 14:40**

Neural networks that mediate behavioural and emotional aspects of fear and anxiety share similar brain regions including, but not exclusive to, the periaqueductal grey, amygdala, prefrontal cortex and cerebellum. They also share similar behavioural outputs. Despite this, there is evidence to suggest that fear and anxiety operate as distinct functional entities with different ascending and descending drivers which contribute to innate versus learned or conditioned emotions. This symposium will bring together leading researchers to present the latest evidence concerning neuronal networks which contribute towards these behaviours.

Speakers will discuss various mechanisms of fear learning and memory in rodents using behavioural measures such as freezing in response to Pavlovian fear conditioning and immediate fear responses to predatory threat. In parallel with human investigations, this will provide a greater understanding of mechanisms underlying clinical disorders such as post-traumatic stress disorder (PTSD) and is also relatable to general anxiety disorders and phobias.

Chair: Dr Charlotte Lawrenson (University of Bristol)

Co-chair: Professor Richard Apps (University of Bristol)

Speaker 1: Professor Michael Fanselow (UCLA, California)

'Neural Mechanisms of Post-Traumatic Stress Disorder as seen through Stress-Enhanced Fear Learning'

Speaker 2: Mr Nikolas Karalis (Ludwig-Maximilians University, Munich)

'Prefrontal oscillatory mechanisms of fear behaviour'

Speaker 3: Dr Sarah Garfinkel (University of Sussex)

'Neural mechanisms underlying recurrent fear memories in Post-traumatic stress disorder'

Speaker 4: Dr Charlotte Lawrenson (University of Bristol)

'Cerebellar-periaqueductal gray interactions in fear behaviour'