



Introductory Remarks to Symposium 29

Orexin beyond sleep

Markus Fendt and Michael Koch, Magdeburg and Bremen

The neuropeptide orexin (also called hypocretin) is mainly known for its important role in mediating feeding and promoting wakefulness. However, during the last decade more and more research revealed that orexin participates in several other behavioral and physiological processes such as fear and anxiety, reward, as well as cognition. This led to the hypothesis that “orexin translates motivational activation into organized suites of psychological and physiological processes supporting adaptive behavior” (Mahler et al. 2014).

This symposium will be dedicated to elucidate the integrated function of orexin, meaning orexin’s role beyond the well-known function in regulating the sleep/wake cycle. One focus of the symposium is orexin’s role in fear and anxiety. We will discuss how orexin and orexin receptors modulate the different phases of fear learning and extinction, as well as their role in anxiety induced by innate anxiogenic stimuli or panicogenic substances. Furthermore, we will elucidate how orexin transmission in the nucleus accumbens is involved in impulse control, based on data collected in a rat model of binge eating disorder. Last, the symposium will show how orexin neurons in the hypothalamus are involved in the activity of larger neuronal networks in the cortex, hippocampus and reward system.

Symposium 29

Friday, March 22, 2019
14:30 - 16:30, Lecture Hall 103

Chairs: Markus Fendt and Michael Koch,
Magdeburg and Bremen

- 14:30 **Opening Remarks**
- 14:35 Fernando Berrendero, Madrid, Spain
OREXIN REGULATION OF FEAR LEARNING
AND EXTINCTION (S29-1)
- 15:00 Nadine Faesel, Magdeburg
ROLE OF OREXIN DEFICIENCY IN PANIC-LIKE
ANXIETY (S29-2)
- 15:25 Archana Durairaja, Magdeburg
ROLE OF OREXIN IN COGNITIVE FLEXIBILITY
(S29-3)
- 15:40 Julia Schuller, Bremen
NEUROCHEMICAL INVESTIGATION OF
IMPULSE CONTROL IN A RAT MODEL OF
BINGE EATING DISORDER (S29-4)
- 16:05 Marta Carus-Cadavieco, Cologne
HYPOTHALAMIC NETWORK OSCILLATIONS
AND REGULATION OF FEEDING BEHAVIOUR
(S29-5)