

## Introductory Remarks to Symposium 14

### Plasticity in unexpected places: flexible circuits for instinctive behaviours

*Johannes Kohl and Vanessa Stempel, London (UK) and Frankfurt/Main*

Instinctive behaviours such as mating, parenting and aggression can be performed without prior learning and likely rely on circuits that are pre-wired during development. However, these behaviours are not merely stereotyped fixed-action patterns. Rather, they can be highly flexible to accommodate external (environmental) and internal (physiological) changes and are profoundly modulated by experience. Recent advances in behavioural and circuit neuroscience now permit us to identify behaviour-specific cell types and circuits, and to interrogate their form and function with unprecedented resolution in the behaving animal.

This symposium will bring together researchers studying plasticity in circuits subserving behaviours ranging from parenting (Adi Mizrahi, ELSC Jerusalem), mating (Dhananjay Bambah-Mukku, UCSD) and social avoidance (Takuya Osakada, NYU) to hunger-driven social behaviour (Rebecca Figge-Schlensock, Cologne) and escape (Vanessa Stempel, MPI Frankfurt). Our goal is to identify plasticity mechanisms in instinctive behaviour circuits, to explore how they enable both behavioural robustness and flexibility, and to highlight an unexpected degree of malleability in neural systems often regarded as hardwired and static.

## Symposium 14

*Thursday, March 23, 2023  
11:00 - 13:00, Lecture Hall 9*

Chairs: Johannes Kohl and Vanessa Stempel,  
London (UK) and Frankfurt/Main

- 11:00 **Opening Remarks**
- 11:05 Adi Mizrahi, Jerusalem, Israel  
CORTICAL PLASTICITY OF INNATE BEHAVIOUR (S14-1)
- 11:25 Takuya Osakada, New York, USA  
A DEDICATED HYPOTHALAMIC OXYTOCIN CIRCUIT CONTROLS SOCIAL AVOIDANCE LEARNING (S14-2)
- 11:45 Rebecca Figge-Schlensock, Cologne  
DISTINCT LATERAL HYPOTHALAMIC CELL POPULATIONS RESIST HUNGER PRESSURE TO BALANCE NUTRITIONAL AND SOCIAL NEEDS (S14-3)
- 11:55 Dhananjay Bambah-Mukku, La Jolla, USA  
IDENTIFICATION OF A HYPOTHALAMIC LOCUS GATING BEHAVIOURAL SEX-SPECIFICITY (S14-4)
- 12:15 Vanessa Stempel, Frankfurt/Main  
MIDBRAIN CIRCUITS FOR FLEXIBLE INSTINCTIVE BEHAVIOURS (S14-5)
- 12:35 **Discussion and Concluding Remarks**