

BDR SEMINAR (Kobe & online hybrid)

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Friday, July 26, 2024

15:00-16:00

1F Auditorium, DB Building C, Kobe / Broadcast online via Zoom

Zoom meeting URL will be announced on the event day by e-mail.

※Non-BDR members: Please register from the following link.

<https://krs2.riken.jp/m/bdrseminarregistration> (Registration deadline: July 23)

An Emerging Network of Brain Regions for Controlling Parental Behavior

This seminar is a part of the BDR Stage Transition Project Seminar Series for 2024-2025.

Summary

Retrieval of lost pups that have become separated from the nest is a fundamental component of parental behavior. This behavior appears early in maternity and improves with time and practice. Interestingly, it can also be elicited in nulliparous females when they are co-housed with a dam and her litter, or even when they are just given daily time to interact with pups in the absence of the dam. While retrieval behavior appears superficially simple, recent data from our lab and others reveal rich complexity to its regulation. As we expand our recordings to new brain regions, we are finding connections between many of them. What is emerging is the definition of a network of brain areas including the amygdala, nucleus accumbens, and the anterior cingulate cortex, that are bound and co-regulated by broadcast neuromodulatory systems that release noradrenaline and dopamine. These two neurotransmitters seem to play complementary roles in motivating and reinforcing maternal retrieval. I will present some of our recent results from optical recordings of nodes in this network during active pup retrieval.



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