SFB 1315
Mechanisms and Disturbances in Memory Consolidation:
From synapses to systems

Tuesday

NOV 10, 2020
4:00 pm CET

ZOOM ID: 7754910236
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SFB 1315 LECTURE SERIES 2019-2021

CONFLICT OR COMPLEMENT: PARALLEL MEMORIES CONTROL BEHAVIOUR IN DROSOPHILA

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Drosophila can learn to associate odours with reward or punishment and the resulting memories direct odour-specific approach or avoidance behaviours.

Recent progress has revealed a straightforward model for learning in which reinforcing dopaminergic neurons assign valence to odour representations in the neural ensemble of the mushroom bodies.

Dopamine directed synaptic depression alters the route of odour-driven activity through the mushroom body output network. This circuit configuration and influence of internal state guide the expression of appropriate behaviour.

Importantly, learned behaviour is flexible and can be updated as the fly accumulates additional experience.

Our latest studies demonstrate that well-informed behaviour is guided by combining parallel conflicting and complementary memories of opposite valence.

Prof. Waddell's lecture is hosted by David Owald (PI, SFB1315 subproject A07 Charité Berlin), and "meet-the-speaker" following his talk, by Denis Alevi (PhD subproject B01 TU Berlin) and Desiree Laber (PhD subproject A07 Charité Berlin)

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