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

SFB 1315 LECTURE SERIES 2019-2022

DEVELOPMENTAL CIRCUIT MECHANISMS OF ADAPTIVE THREAT AVOIDANCE

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DEVELOPMENTAL CIRCUIT MECHANISMS OF ADAPTIVE THREAT AVOIDANCE

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The medial prefrontal cortex (mPFC) makes essential contributions to learning, mood, and decision making, including evaluating and responding to threats. mPFC circuits undergo an exceptionally prolonged maturation that is likely necessary to support complex behaviors, but extends the developmental window during which insults can perturb circuit assembly. Indeed, mPFC dysfunction is linked to many psychiatric disorders including anxiety and depression, which often arise during adolescence and are characterized by inappropriate avoidance.

Although mPFC circuits are clear therapeutic targets for psychiatric disorders, substantial gaps in our understanding of how key mPFC connections form and how this maturation enables emergence of complex cognitive and emotional behaviors prevent us from designing effective interventions. Our research addresses this knowledge gap by performing precision analysis of mPFC threat circuit function across development.

Dr. Denardo’s lecture is part of Brain Awareness Week in cooperation with BCCN Berlin, the Einstein Center for Neurosciences Berlin, and the NeuroCure Cluster of Excellence www.brainawareness.org

A05 Postdoc Clarissa Whitmire will introduce the talk, and Speaker Matthew Larkum will moderate Q&A.