



Talks by rising stars of neuroscience

**Primary motor cortex circuitry in a mouse model of
Parkinson's Disease**

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The primary motor cortex (M1) is a major output center for movement execution and motor learning, and its dysfunction contributes to the pathophysiology of Parkinson's disease (PD). While human studies have indicated that a loss of midbrain dopamine neurons alters M1 activation, the mechanisms underlying this phenomenon remain unclear. Using a mouse model of PD, we uncovered several shifts within M1 circuitry following dopamine depletion, including impaired excitation by thalamocortical afferents and altered excitability. Our findings add to the growing body of literature highlighting M1 as a major contributor in PD, and provide targeted neural substrates for possible therapeutic interventions.

Event link:

<https://www.crowdcast.io/e/wwneurise/>