

Weekly Colloquium

Tuesday, 5/8/2018, 12:30pm, Billings Building – Rosedale Conference Room

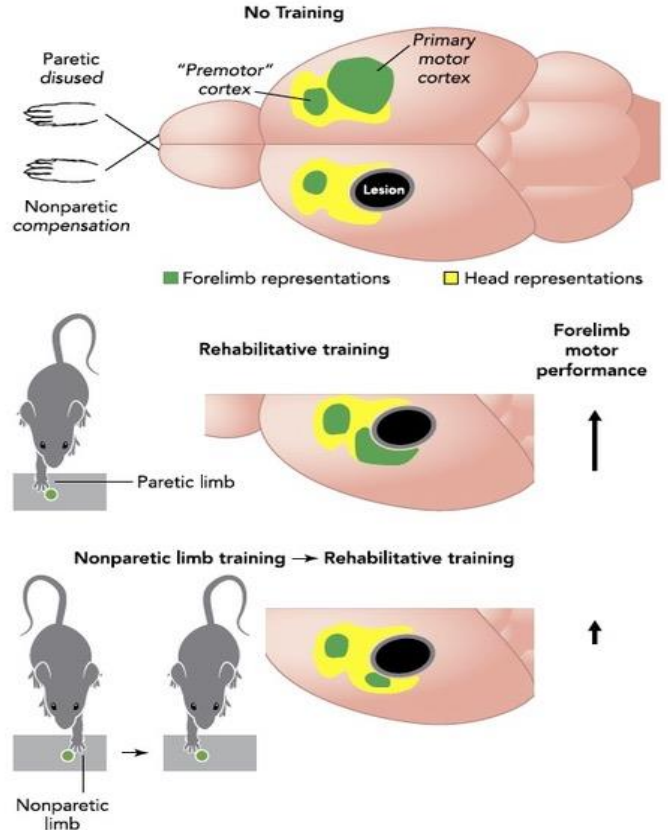
“Experience-driven competition in neural reorganization after stroke”

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Abstract

Stroke instigates a prolonged period of neuroanatomical reorganization that is extraordinarily sensitive to behavioral experience. This talk focuses on findings from rodent stroke models that support critical roles for experience in shaping this process of reorganization. Behavioral interventions, such as rehabilitative training, can interact with regenerative responses to drive brain reorganization in functionally beneficial directions. However, "self-taught" compensatory behaviors may normally dominate experience-driven patterns of reorganization, and they can drive neural reorganization patterns that are suboptimal for outcome and competitive with those mediating rehabilitative training efficacy.



Publications

Kim SY, Hsu J-E, Husbands LC, Kleim JA & Jones TA (2018) Coordinated plasticity of synapses and astrocytes underlies practice-driven functional vicariation in peri-infarct motor cortex. *Journal of Neuroscience*. 38: 93-107

Jones TA (2017) Motor compensation and its effects on neural reorganization after stroke. *Nature Reviews Neuroscience*. 18:267-280.

Kim SY, Allred RP, Adkins DL, Tennant KA, Donlan NA, Kleim JA & Jones TA (2015) Experience with the "good" limb induces aberrant synaptic plasticity in the perilesion cortex after stroke. *Journal of Neuroscience*. 35:8604-8610