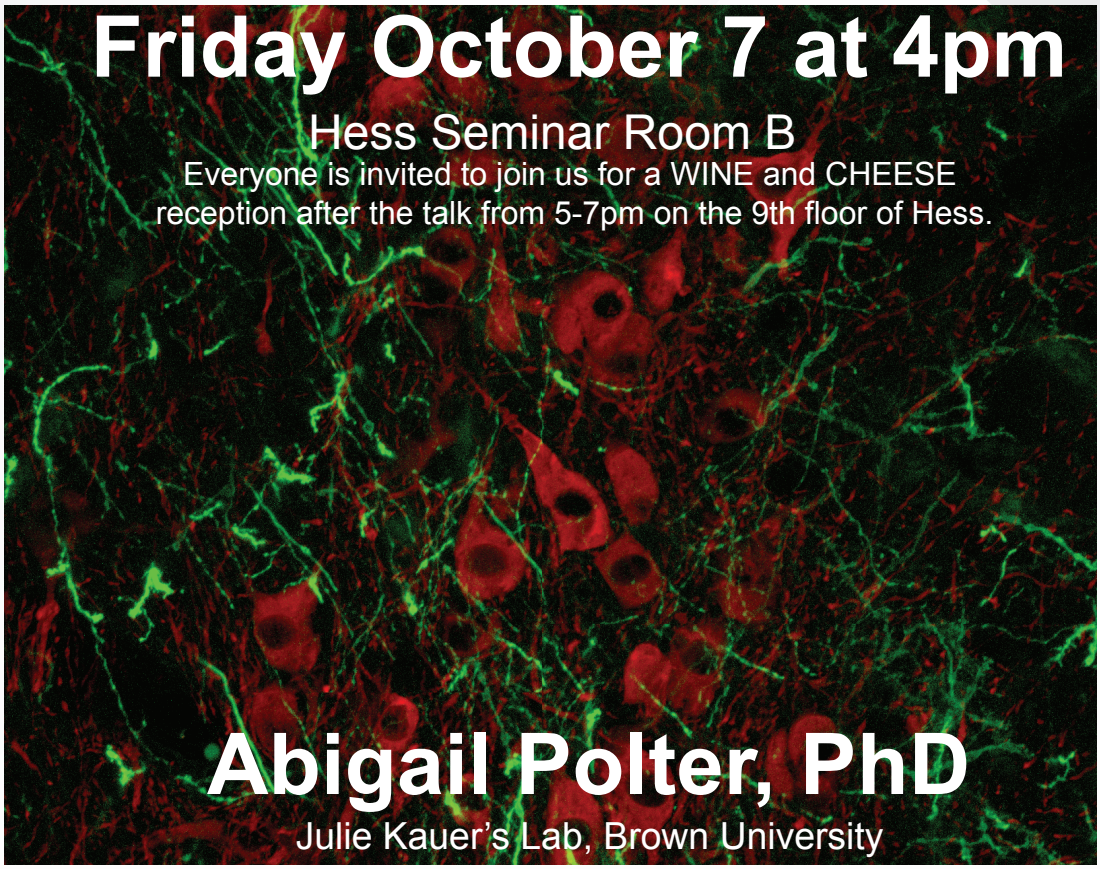
MSN*seminars*

*presents*

# "VTA Inhibitory Synapses as a Target of Stress"

At 12pm, postdocs and students are invited to chat with our speaker during a FREE LUNCH in Icahn 10-84.




Emerging evidence shows that dopaminergic neurons in the ventral tegmental area (VTA) are an important locus for the effects of stress, and understanding regulation of synaptic inputs onto these neurons will provide novel targets for treating stress-linked disorders. We previously identified a long-term potentiation of GABAergic synapses onto these neurons (LTP-GABA) that is blocked for several days by a single exposure to acute stress through persistent activation of kappa opioid receptors (KORs). Our recent work has focused on understanding the mechanism by which KORs are persistently activated by stress, finding that LTP-GABA is blocked by constitutive activation of KORs. We also find that KOR-mediated regulation of LTP-GABA is specific to synapses arising from local interneurons. These studies reveal novel mechanisms of regulation of inhibitory synapses by stress as well as further understanding of how stressful experiences can modulate specific synaptic connections within the complex circuitry of the VTA.

Icahn School of Medicine at Mount Sinai

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