



## Xiaojing Ye, PhD

Laboratory of Cristina Alberini, New York University

# How does memory strengthen vs. extinguish through retrieval?

Memory retrieval serves an important function to modulate the strength of the existing memories. Re-exposure to the context in which a treat was experienced can either increase or decrease fear responses. However, it remains unclear whether these two processes are mediated by distinct neural circuits and molecular mechanisms, and whether there is a functional link between the two. In the seminar, I will discuss our recent findings that activity in direct projections from the dorsal hippocampus to different subregions of the medial prefrontal cortex is critically engaged during retrieval to regulate memory strength. Furthermore, I will discuss how a concerted action of excitatory and inhibitory synaptic proteins neuroligin-1 and neuroligin-2 in the prefrontal cortex controls the balance between retrieval-mediated memory enhancement and suppression.



Icahn  
School of  
Medicine at  
**Mount  
Sinai**

**Friday, March 3rd - 4pm**

Hess Seminar - Room B

WINE and CHEESE reception

5-7pm, Hess, 9th Flr.

**#MSN** *seminars*