

100th WPI-IIIS Seminar

CANE technology and its application in dissecting the social fear circuit

I developed a new technology called CANE for Capturing Activated Neural Ensembles. CANE has two components. First, a knock-in mouse, called Fos^{TVA}, in which Fos drives the expression of a destabilized foreign receptor (dsTVA). Second, designer viruses pseudotyped with a mutated coat protein (EnvA) that can express desired transgenes. Since EnvA-coated viruses can only infect neurons expressing dsTVA, injections of EnvA-coated lentivirus (CANE-LV) or rabies viruses (CANE-RV) enables effective “capture” of neurons that are activated and therefore express Fos by a natural behavior. Using CANE, I delineate the causal functions and connectivity of hypothalamic neurons activated by a social-fear experience.



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Date: **Thursday, January 12, 2017**

Time: **12:00 – 13:00**

Venue: **1F Auditorium, IIIS Building**



IIIS

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