

136th WPI-IIIS Seminar

General Anesthesia, Sleep, and Pain

General anesthesia (GA) is a reversible brain and body state characterized by unconsciousness, analgesia, amnesia, and immobility while maintaining vital physiological functions. We are interested in determining how chemically diverse groups of GA drugs all can produce the unconscious state and also suppress pain. We discovered specific populations of neurons that are persistently activated by GA drugs inside the brain. Using imaging/recording and chemogenetic/optogenetic manipulation, we found that one group of GA-activated neurons is critical for promoting and sustaining slow-wave-sleep, a naturally occurring unconscious state; and another group of GA-activated neurons exerts profound analgesic (pain suppression) effect.



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Date: **Monday, July 30, 2018**

Time: **11:00 – 12:00**

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



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