

STEVEN A. BROWN

Biosketch and talk summary

My laboratory studies the molecular mechanisms and neural circuits underlying sleep and circadian behaviour, using both mouse models and human cells. Our studies have shown how sleep and circadian influences cooperate to regulate synaptic dynamics, and even led to the discovery of novel causes of human intellectual disability.



In this talk, I'll describe recent biochemical and optogenetics experiments that show how daily control of sleep timing and depth are controlled both "top-down" by cellular signaling pathways locally in cortex, and "bottom-up" by discrete hypothalamic circuits. Together, these pathways contribute to give us a good night's sleep...and mice a good day's sleep.