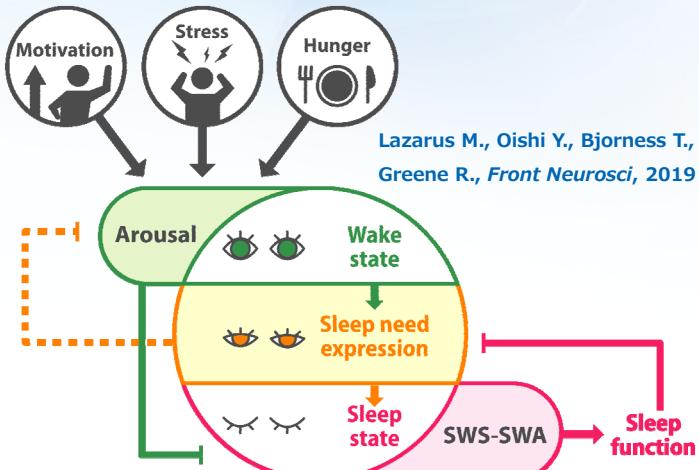




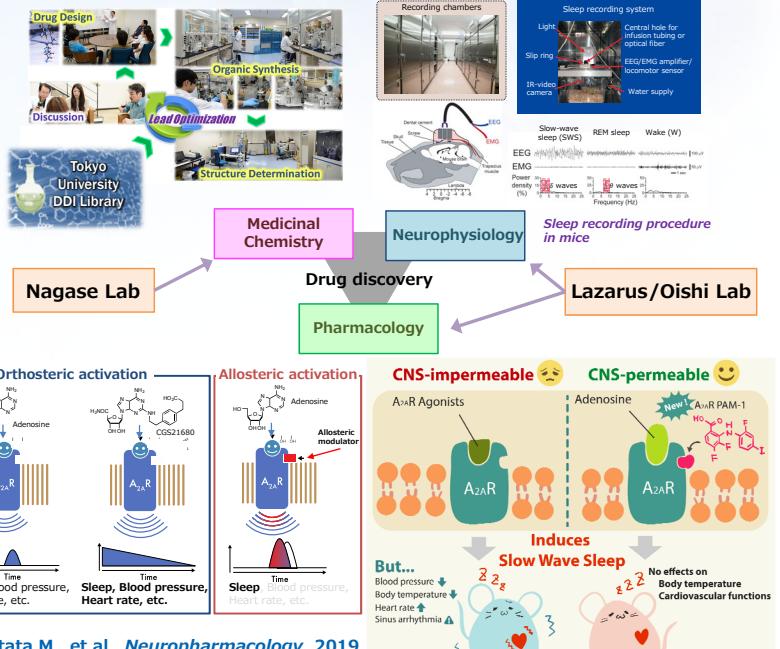
WPI-IIIS Lazarus/Oishi Lab

Systems Pharmacology, International Institute for Integrative Sleep Medicine (WPI-IIIS)

Regulation of sleep homeostasis by arousal

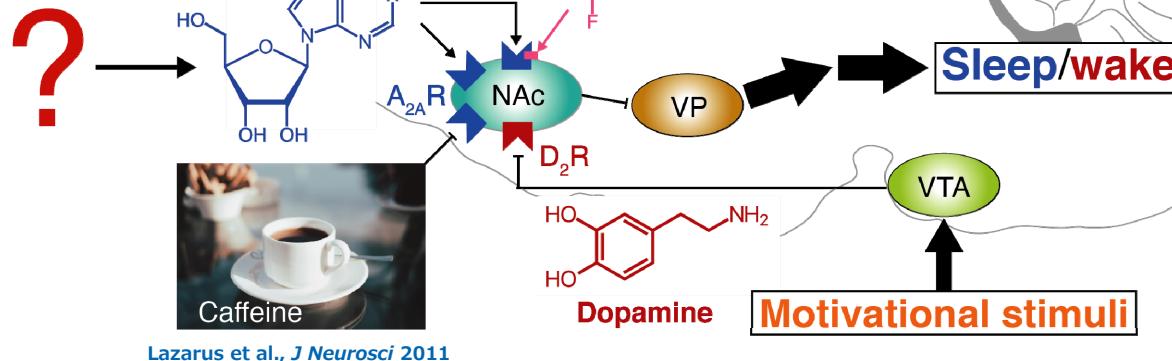


Drug discovery to treat insomnia

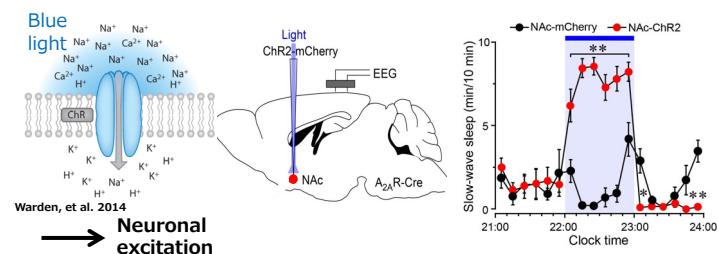


The neural mechanisms of sleepiness are widely unknown. Sleep is established in the absence of arousing inputs, including motivation.

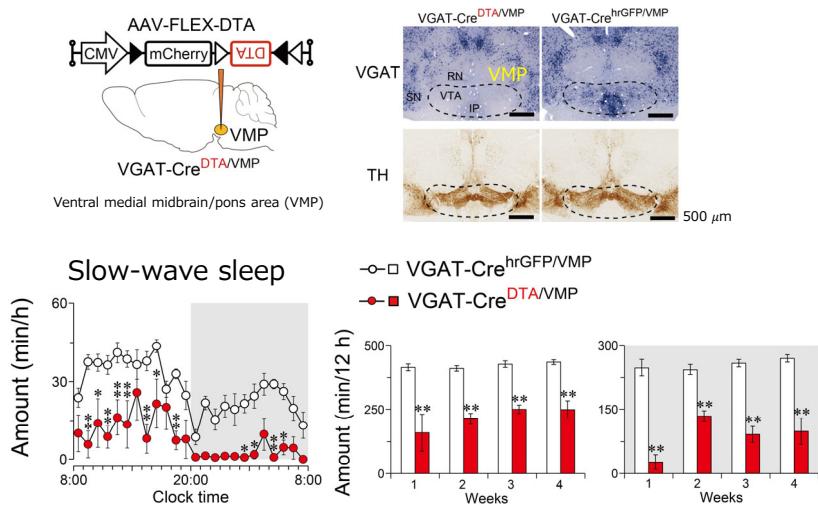
The nucleus accumbens (NAc) and ventral tegmental area (VTA) constitute a well-characterized reward circuit in the brain.



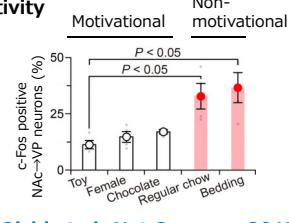
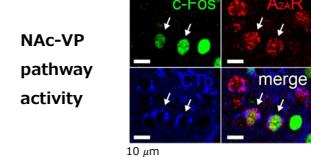
Sleep control by the NAc



"Short-sleeper" mice by neuronal ablation



Motivational stimuli regulate NAc activity



Slow-wave sleep

