

# 205<sup>th</sup> WPI-IIIS Seminar

## Sleep Fragmentation and the Glymphatic System

Large cohort data suggests that the parameters reflecting sleep fragmentation instead of total sleep duration correlate with cognition. Sleep fragmentation are commonly prevalent in multiple neurological diseases settings as well as in healthy populations, such as the shift workers. Recent years, the concept of “brain wash during sleep” becomes popular and well accepted. We have been interested in studying the aberrant behavior outcomes, brain pathologies, transcriptomic alterations, as well as the glymphatic dysregulations in the young healthy mouse model of sleep fragmentation. We also attempted to explore the underlying mechanisms that generate the impairment of glymphatic clearance. We found that chronic sleep fragmentation impair cognitive function, downregulates the glymphatic clearance efficiency, which could at least in-part be explained by the suppressed slow vasomotion of cerebral vessels. In the seminar, I will present a series of our recent studies and outlook for the future research.



### Dr. Fengfei Ding

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Date: **Friday, October 18, 2024**

Time: **13:45 – 14:30**

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

*\* On-site participation only*



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