

Falling asleep after a big meal: Satiety quiescence in *C. elegans*

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From simple invertebrates to the most complicated humans, many animals exhibit a behavioral state of sleep. Yet its purpose remains mysterious.

Many animals in wild spend most of their time sleeping, if they are not seeking for food or mates or pursued by predators. Interestingly, a common behavioral outcome of releases from these demands or stresses is often sleep. This might suggest that for many animals with a simple brain, sleep is a resting and default state after an animal has secured food, mates, and safety.

We found *C. elegans* shows a postprandial sleep-like behavior, satiety quiescence. It has been shown that circadian rhythm is regulated by feeding cues and perturbation of the rhythm is often associated with obesity. Also orexin regulates both sleep and feeding, suggesting an intrinsic link between feeding and sleep. By studying the genetics and the circuit of satiety quiescence taking an advantage of the simple yet powerful genetics and rich resources, we aim to understand how and why sleep is regulated by feeding and metabolism.

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