In this study, a screen was performed on a collection of knockdown flies in candidate genes thought to be important for sleep patterns. We wanted to test if the loss of these genes caused disruptions in the fly’s ability to maintain a normal sleep routine. To examine their behavior, we created a device that can house many flies in separate tubes to track their movements under normal light/dark cycle conditions. Mutant flies were placed in the closed tubes and their movements along the tubes were detected by an infrared LED beam at the center. The detector reports whether the fly crossed the beam or not for every one-minute interval. We recorded fly activity over 96 hours and calculated the total amount of hours slept during the day and night, and also the time it takes the fly to fall asleep.

We found that the knockout flies took a longer time to fall asleep after the lights were turned off than wildtype flies.

Chart, bar chart, histogram

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Chart, histogram

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Chart, box and whisker chart

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