

Peer Review

Review of: "The Intergeniculate Leaflet Plays a Key Role in Sex Differences in the Biological Rhythm of Locomotor Activity in M_4 Muscarinic Receptor Knockout Mice"

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This paper aims to understand the reason for differences in locomotion activity between males and females by testing for the presence of mAChR densities under different light conditions in the test samples.

Major concerns

1. The conclusion of the research is made with a biased test sample size comparison. Why is the effect of constant darkness or constant light across the 8 brain regions not checked for females?
2. Why should we care about finding out the structures in the brain that are responsible for the circadian locomotor activity rhythm? It would be good practice to give the overall big picture in the abstract about why this research is important, especially when it was stated that females show changes in locomotor activity biological rhythms while males do not.

Minor concern

1. It would improve clarity to state why mAChR densities between males and females were compared under light/dark conditions.

Declarations

Potential competing interests: No potential competing interests to declare.