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Sleep scoring made easy—Semi-automated sleep analysis software and manual rescoring tools for basic sleep research in mice

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GRAPHICAL ABSTRACT



ABSTRACT

Studying sleep behavior in animal models demands clear separation of vigilance states. Pure manual scoring is time-consuming and commercial scoring software is costly. We present a LabVIEW-based, semi-automated scoring routine using recorded EEG and EMG signals. This scoring routine is

- designed to reliably assign the vigilance/sleep states wakefulness (WAKE), non-rapid eye movement sleep (NREMS) and rapid eye movement sleep (REMS) to defined EEG/EMG episodes.
- straightforward to use even for beginners in the field of sleep research.
- freely available upon request.

Chronic EEG (electroencephalogram) and EMG (electromyogram) recordings from mice were used to design and evaluate the scoring routine consisting of an artifact-removal, a scoring- and a rescoring routine. The scoring

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