

Peer Review

Review of: "A Contextual Fear Conditioning Paradigm in Head-Fixed Mice Exploring Virtual Reality"

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The manuscript presents an innovative contextual fear conditioning paradigm using head-fixed mice navigating a virtual reality environment. It provides detailed technical descriptions and demonstrates the feasibility of this approach for studying fear conditioning circuits. This is particularly valuable, as it enables the use of techniques that are challenging or impossible to apply in freely moving animals. One notable concern is the use of the term "freezing" as the primary measure of conditioned fear. In this study, freezing is defined as a velocity below 1 cm/s. However, this definition differs from the classical freezing, defined as complete immobility except for respiratory movements. As a result, the observed behavior may more closely resemble passive avoidance rather than conditioned freezing. While passive avoidance also arises from contextual fear, its expression differs from that of classical contextual freezing, potentially leading to differences in the interpretation of the results.

Declarations

Potential competing interests: No potential competing interests to declare.