

Rat lockbox

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Summary

Home-cage-based lockbox tasks involving mechanical puzzles baited with food rewards have been used to assess problem-solving in mice and to enrich their environment. In this study, we will evaluate rats' problem-solving behavior using a lockbox task previously developed for mice, which combines four elements that block each other and can be solved by manipulating them in a specific order. Rats interacting with the lockboxes will be video-recorded, and the recordings will be used for both manual and automated analyses of learning performance and problem-solving strategies. Additionally, we will examine the effects of long-term exposure to diverse single- and/or multiple-element lockbox tasks on behavioral and physiological parameters in rats. The study will include both female and male rats.

Registration details

Status of the study	Registered
Date of registration	2025-12-15
Notified date of accessibility	2030-11-25
DOI	10.17590/asr.0000417
Planned start of the study	2025-11-26
Planned end of the study	2030-02-28
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