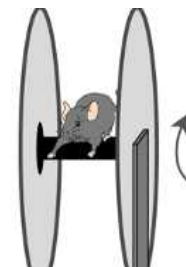


Nov 14, 2024

Accelerating Rotarod Task in Mice

DOI

<https://dx.doi.org/10.17504/protocols.io.5jyl8dm56g2w/v1>



Richard Roth¹, Fuu-Jiun Hwang¹, Jun B. Ding¹, Yue Sun¹

¹Stanford University



Christine Weber-Schmidt

Allen Institute

Create & collaborate more with a free account

Edit and publish protocols, collaborate in communities, share insights through comments, and track progress with run records.

Create free account

OPEN  ACCESS



DOI: <https://dx.doi.org/10.17504/protocols.io.5jyl8dm56g2w/v1>

Protocol Citation: Richard Roth, Fuu-Jiun Hwang, Jun B. Ding, Yue Sun 2024. Accelerating Rotarod Task in Mice. **protocols.io** <https://dx.doi.org/10.17504/protocols.io.5jyl8dm56g2w/v1>

License: This is an open access protocol distributed under the terms of the **Creative Commons Attribution License**, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited



Protocol status: Working

We use this protocol and it's working

Created: November 09, 2024

Last Modified: November 14, 2024

Protocol Integer ID: 111828

Keywords: ASAPCRN, motor learning in mice, rotarod task in mice, task in mice, motor learning, accelerating rotarod task, rotarod task, mice, mice this protocol

Funders Acknowledgements:

Aligning Science Across Parkinson's (ASAP)

Grant ID: ASAP-020551

Abstract

This protocol describes an accelerating rotarod task used to study motor learning in mice.

Image Attribution

Schematic of rotarod apparatus.

Guidelines

Animals: Mice are placed in a reverse 12h light/dark cycle room for at least one week prior to training.

Safety warnings

! Wear appropriate PPE as required by your institution.

Ethics statement

Prior ethics approval (e.g. IACUC) should be obtained before performing these experiments. Approval was obtained by the Stanford University IACUC before any procedures were performed.



Training (4 days)

- 1 For the accelerating rotarod task, mice are trained for 4 days with 3 training sessions each day each 1 hours apart.
- 2 The first 2 days, the rotarod is set up to accelerate from 4 rpm to 40 rpm linearly over 5 minutes.
- 3 The last 2 days, the rotarod is set up to accelerate from 8 rpm to 80 rpm linearly over 5 minutes.
- 4 Once mice are placed on the rotarod and are stable on the stationary rod, the motor is turned on.
- 5 Behavioral performance is quantified by measuring the time it takes for the mouse to fall off the rod from the beginning of rotation.