Feb 12, 2024

Rotarod test in rats

DOI
dx.doi.org/10.17504/protocols.io.5qpvo3zo9v4o/v1

Eduard Bentea[1], María Sanchiz Calvo[1], Veerle Baekelandt[1]

[1]Katholieke Universiteit Leuven

Eduard Bentea
KU Leuven

DOI: https://dx.doi.org/10.17504/protocols.io.5qpvo3zo9v4o/v1

Protocol Citation: Eduard Bentea, María Sanchiz Calvo, Veerle Baekelandt 2024. Rotarod test in rats. **protocols.io https://dx.doi.org/10.17504/protocols.io.5qpvo3zo9v4o/v1**

Protocol status: Working
We use this protocol and it's working

Created: February 05, 2024

Last Modified: May 31, 2024

Protocol Integer ID: 94688

Keywords: ASAPCRN, motor function, behavioral test, rats, rotarod test in rat, rotarod test in rats protocol, rotarod test, rat models with motor deficit, rotarod, motor coordination, motor deficit, impaired motor function, rat model, rotating rod, rat, motor function, rats protocol, balance, test

Funders Acknowledgements:
ASAP (Aligning Science Across Parkinson's)

Abstract

Protocol for performing the rotarod test in rats. This test evaluated motor coordination and balance, and can be used in rat models with motor deficits, such as models of Parkison's disease. Rats with impaired motor function show a decreased latency to fall from the rotating rod.

Troubleshooting

Training

1h 23m

1 Bring cages to the behavioral room for at least 01:00:00 prior to the test for habituation — 1h

2 Habituate rats on the rotarod for 00:05:00 at 5 rpm, place back in case they fall — 5m

3 00:05:00 rest — 5m

4 Test rats for 00:01:00 at 5 rpm — 1m

5 00:05:00 rest — 5m

6 Test rats for 00:01:00 at 10 rpm — 1m

7 00:05:00 rest — 5m

8 Test rats for 00:01:00 at 15 rpm — 1m

Baseline

1h 25m

9 One day after training, perform baseline measurements

10 Bring cages to the behavioral room for at least 01:00:00 prior to the test for habituation — 1h

11 Test rats at 4-40 rpm for a total duration of 00:05:00 — 5m

12 00:05:00 rest 5m

13 Test rats at 4-40 rpm for a total duration of 00:05:00 5m

14 00:05:00 rest 5m

15 Test rats at 4-40 rpm for a total duration of 00:05:00 5m

Test 1h 25m

16 At different timepoints during the experiment, evaluate changes in motor performance using the same protocol as during baseline

17 Bring cages to the behavioral room for at least 01:00:00 prior to the test for habituation 1h

18 Test rats at 4-40 rpm for a total duration of 00:05:00 5m

19 00:05:00 rest 5m

20 Test rats at 4-40 rpm for a total duration of 00:05:00 5m

21 00:05:00 rest 5m

22 Test rats at 4-40 rpm for a total duration of 00:05:00 5m