



Feb 12, 2024

Rotarod test in rats

DOI

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

Eduard Bentea¹, María Sanchiz Calvo¹, Veerle Baekelandt¹

¹Katholieke Universiteit Leuven



Eduard Bentea

KU Leuven

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.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>

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: 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 Parkinson'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