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Descending Platform V.3

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Protocol status: Working

We use this protocol and it's working



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Abstract

Behavioral test to assess motor function.

The test is using a custom made 45-degree grid path with a width of 5cm and a length of 45cm. The 15cm one side is oriented with a 45-degree angle. The grid is formed by metal mesh with a 0.5cm space between.

Materials

Horizontal grid: custom made 45-degree grid path with a width of 5cm and a length of 45cm. 15cm of one side is oriented with a 45-degree angle. The grid is formed by metal mesh with a 0.5cm space between.



- 1 Place the custom-made, metal mesh grid to have an angle of 45 degrees with the floor.
- 2 Place a camera above the grid to record the entire procedure. Here we use the Logitech C920 webcam and windows camera software.
- 3 Orient the grid to have the starting spot horizontal.
- 4 At the end of the platform, place the animal cage to provide a safe target.
- 5 Take the mouse out of its cage using a paper tube to avoid stress and gently place the mouse on the starting spot.
- 6 Allow the mouse to explore the starting spot for 2-3 minutes.
- 7 Gently push the mice towards the tilted part of the grid path.
- 8 As soon as the mouse's hindlimbs are crossing the separation between the starting spot and the tilted spot, leave the mouse alone.
- 9 As soon as the mouse reaches the cage, stop the camera and place the cage back into the ventilated rack.
- 10 Clean the platform with 50% ethanol solution to remove stress-related smells.
- 11 Using the video, record the time for each mouse to go from:
1- hindlimb cross the starting spot line to 2- hindlimb touch the cage on the bottom.
- 12 Using 5 randomly selected frames of the period the mice descend the platform, measure the distance between the hindlimb of the mice, average the result to get usable values.