



# STANDARD OPERATING PROCEDURE

**TITLE: Wire Hang Test**

**CATEGORY: Behavioral Assay**

## Introduction

**Goal:** This document aims to provide the reader information on how to run the Wire Hang Test. The test is useful for assessing motor functioning, particularly muscle strength, endurance, and grip strength.

### **Materials:**

- Subjects – any strain of mouse may be used.
- Apparatus – Either a wire cage lid or wire grid (grid squares measuring 1cmx1cm), 2 platforms (50cm in height).
- Accessories: Video camera and tri-pod, stop watch, empty cage with bedding or other cushioning material.

### **Testing set up:**

- Make sure there are barriers placed at the edges of the wire surface to prevent the mouse from climbing onto the other side of the grid.
- Mount the grid on top of the two platforms. Place the empty cage directly underneath of the grid to catch the mouse.
- Tests can be recorded with a video camera in case rescoring is needed.

### **General Testing procedures:**

- Animals should be acclimated to the testing room an hour prior to testing.
- Place the animal on the wire grid. It should be able to grasp the grid with all four limbs.
- Flip the grid over so that the animal is hanging upside down and start the timer.

<b>TITLE: Wire Hang Test</b>	<i>Stanford Behavioral and Functional Neuroscience Laboratory</i>	
<b>CATEGORY: Behavioral Assay</b>	Page 2 of 2	Version 1.0

- Measure the length of time the mouse is able to hold onto the grid. The maximum trial length is 2 minutes and 30 seconds (150s). Remove the animal from the apparatus if it does not fall off the grid after the maximum trial length has been reached.
- Place the animal back into its home cage.
- Run three trials on each day of testing. Mice should be given a resting period (15-20 minutes) in between each trial.
- The test can be repeated at an interval appropriate for the strain being used.

**Data Analysis:**

Average latency to fall can be compared for each day as well as over a time period.